

TEXTILE BULLETIN



Vol. 57

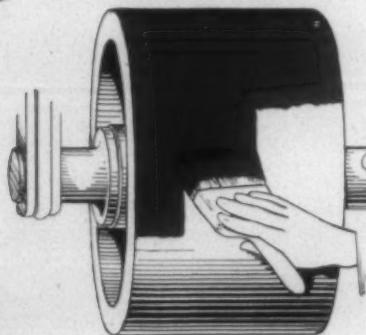
January 15, 1940

No. 10

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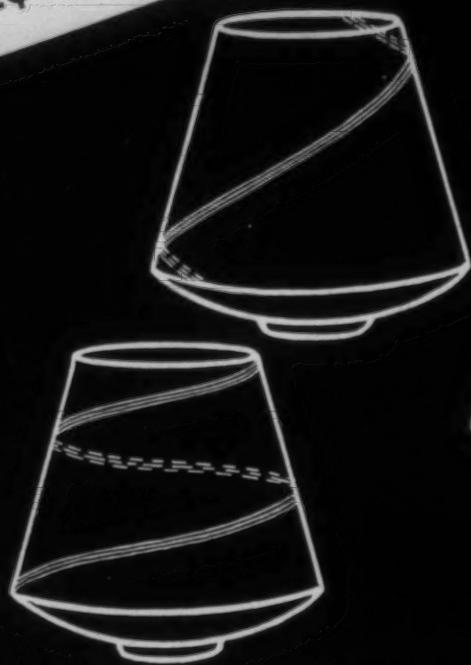
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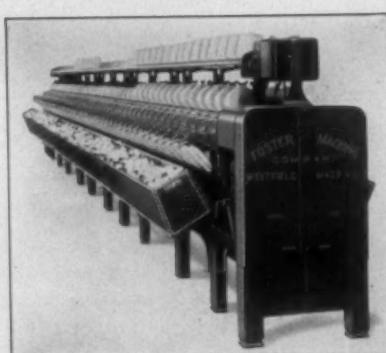
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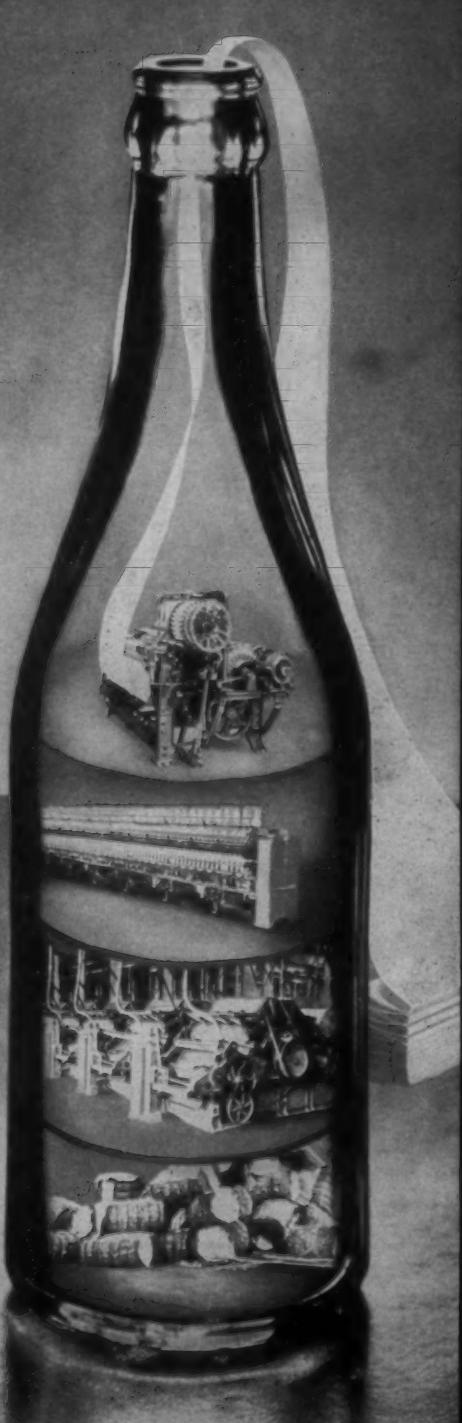
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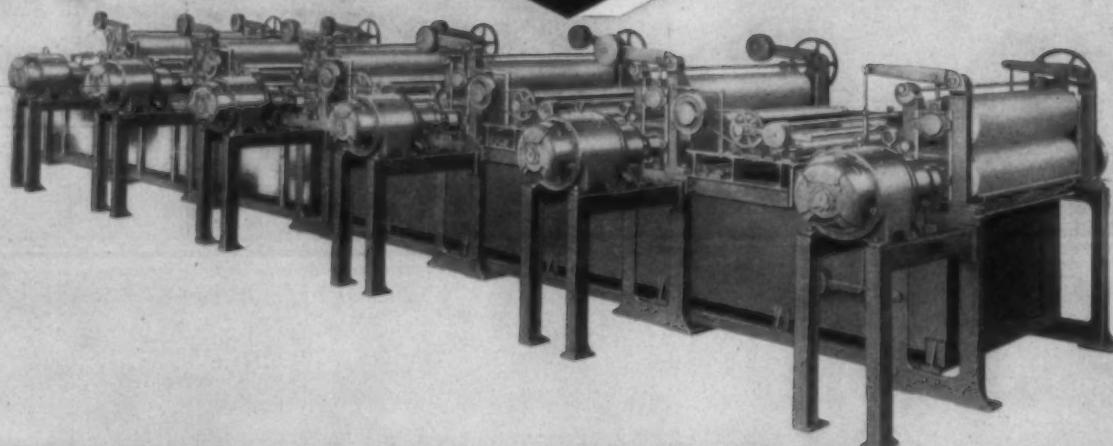
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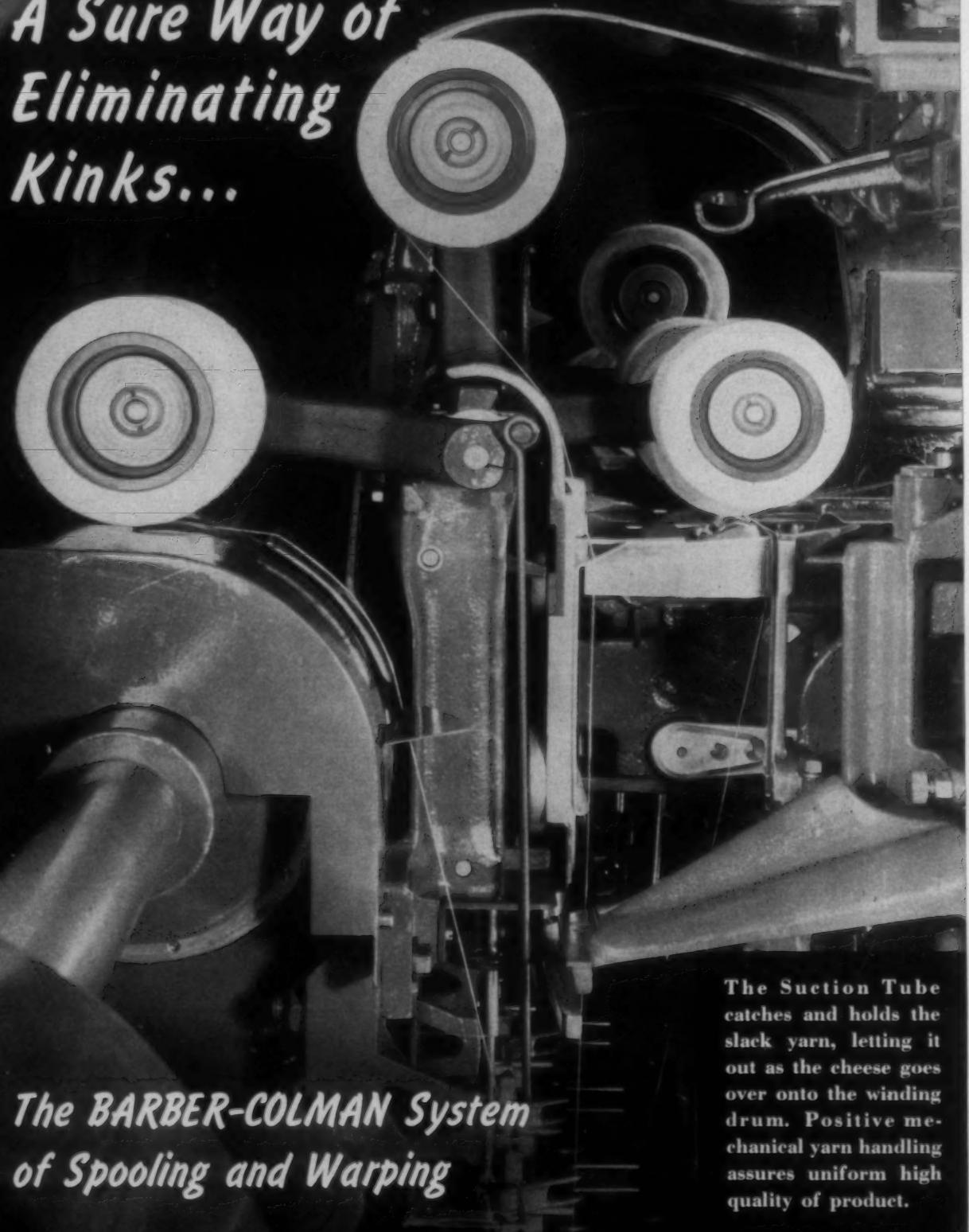
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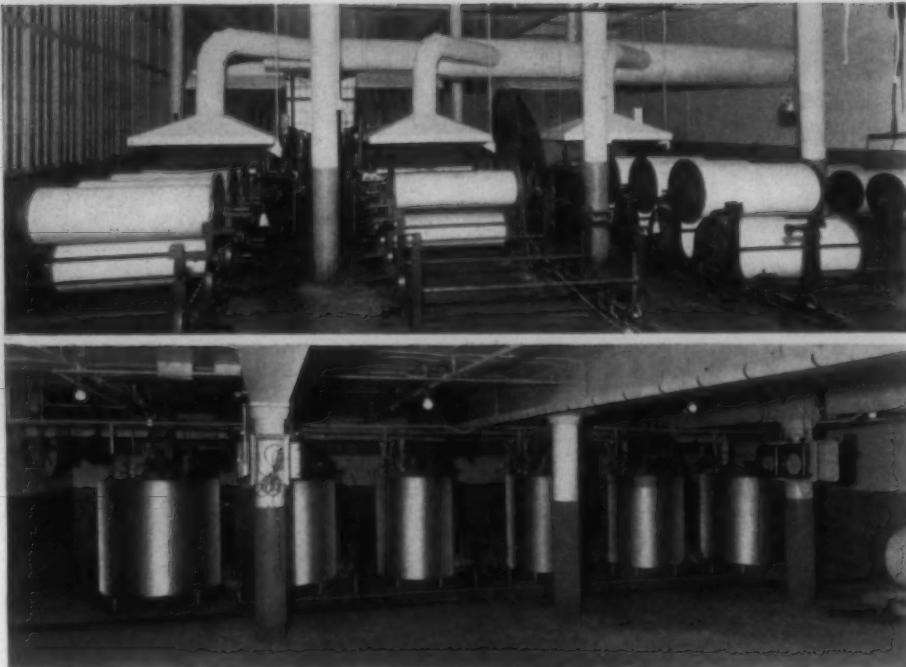
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Top: Rear View of Slasher Room
Bottom: Size Mixing Kettles in Slasher Room

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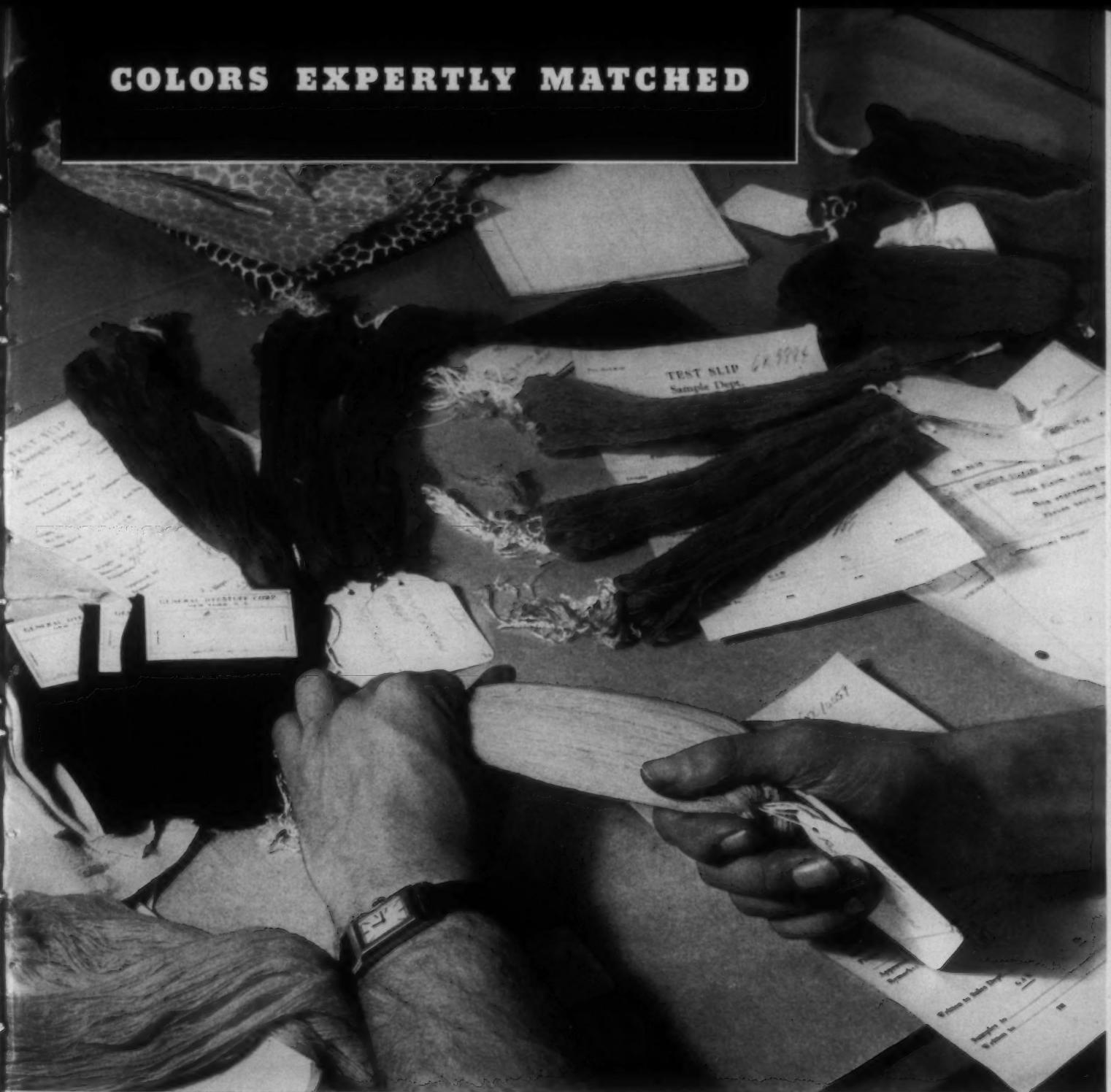


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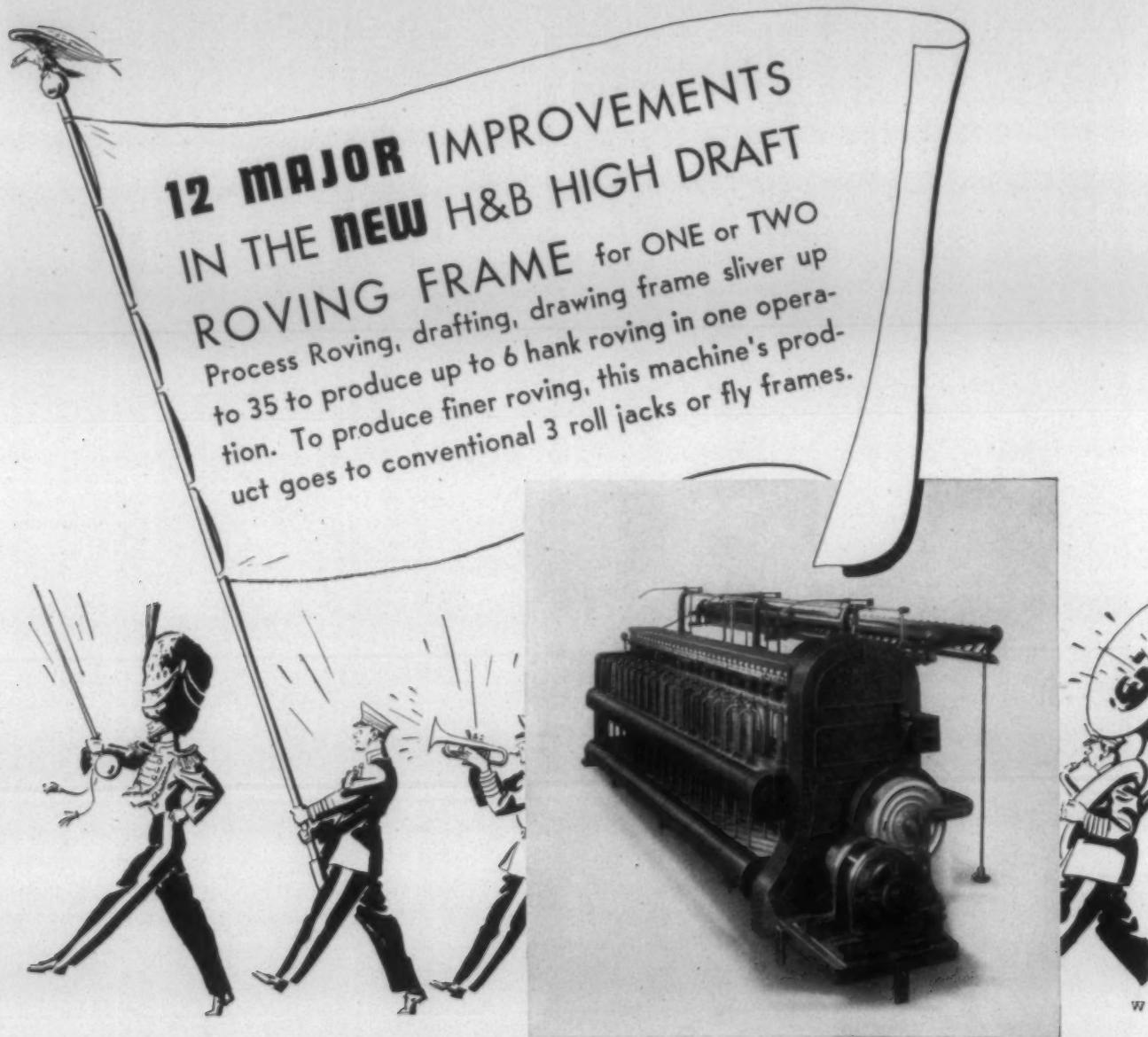
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Charlotte, N. C.



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Vol. 57

January 15, 1940

No. 10

The Cotton Manufacturer and The Cotton Farmer*

By Dr. Claudius T. Murchison, President, Cotton Textile Institute

AMERICAN cotton mills will this year consume more than 70% of the United States' cotton crop. For this cotton they will pay to the farmers a sum of money approximating four hundred million dollars. To process this cotton, they will employ between 375,000 and 400,000 workers, and pay out wages approximating three hundred million dollars. These employment and wage estimates do not include the cutting trades. If we add to the seven hundred million dollars representing raw material and labor the additional items of overhead expense, power, mill supplies and depreciation, the resultant figure will indicate that cotton is the immediate basis of a billion dollar industry in the United States.

Although there is no tariff on cotton, with the exception of the long staple Egyptian type, American mills do not import raw cotton which is competitive with the domestic product. For the manufacture of very fine combed yarn a few thousand bales of cotton are imported annually from Egypt, and for special types of blankets and rugs a few thousand bales are imported annually from China and India. But the imports all together are but a minute fraction of American cotton consumption. Thus, the American cotton manufacturer may be regarded as wholly dependent upon the American cotton farmer, and the farmer in his turn has come to be dependent upon the American cotton manufacturer to take seven bales out of every ten which he produces.

In the relationship between cotton farmers and cotton manufacturers are certain vital factors not present to so great a degree, if at all, between farmers and manufacturers of other agricultural products. These differences have to do with variety of use and extent of competition.

Cotton Extremely Versatile

Cotton possesses a versatility unapproached by any other agricultural product. Wheat, corn, tobacco, sugar cane, meat can be converted into only a limited number

of uses. And their processing is of necessity a mechanical and routine performance, employing methods and machinery susceptible of only slight and gradual refinement over long periods of time. When all is said and done, sugar is a sweetening; wheat is a food; tobacco is a smoke, a chew or a "dip"; and despite every new miracle of form or of flavor, these commodities cannot exceed for commercial purposes their functional limitations. But nevertheless, their competitive positions are secure. The law of compensation establishes each one as supreme in its own field unchallenged by any substitute which cannot be warded off by ordinary alertness and effort.

But not so with cotton, as to limitation of function or as to security from competition. The producers and processors of other major agricultural commodities are to be congratulated that they have no serious problems of age, sex, seasons, social status, occupational differences or fashion. Men, women and children alike eat their bread and meat and candy day and night, summer and winter, and smoke their favorite brand of tobacco in May as in December. But cotton, called upon to clothe a nation, must have different clothes for men, women, children and babies. There are important apparel distinctions between day and night, between summer and winter, between sunshine and rain, between work and play, between the formal and the informal, between the clerk and the mechanic, between the farmer and the sailor. Moreover, under the insidious and universal forces of fashion the character of all these distinctions is constantly changing, and the vogue of one season becomes the antiquity of the next. There must be an unending procession of new cloth constructions, new weave patterns, new ornamental designs, new color combinations, new surface finishes and unending temerity in the adaptation of goods to new and unheard of purposes.

In the realm of household furnishings, cotton must likewise adapt itself to a myriad of uses and tastes. Fashion and fantasy touch every item from curtains to towels. The needs vary from city to country, mountain to seashore, from north to south, from east to west. It is a field

*Presented before the National Association of Commissioners, Secretaries and Directors of Agriculture, Medinah Club, Chicago, Illinois.

which has become pre-empted by specialty goods. That which is unique and individual continually drives away the familiar and the standardized.

In the third great field of cotton consumption, that of industrial uses, the requirements of consumers become even more multitudinous and exacting. Into this field now go approximately 60% of the output of cotton mills. This field has but little room for fashion and none for pure whimsy. Buying is on a carefully calculated price basis and in accordance with scientific specifications and testings. I have reference to such items as automobile tires and upholstery, machinery belting, bags and wrappings, roofing and deck coverings, binding tape and cable insulation, book bindings and concrete curing mats, which are but a few of a host of items which might be mentioned.

Cotton Manufacturer Must Be Ingenious and Aggressive

From this brief and purely suggestive survey of the cotton goods market, it is evident that the cotton manufacturing industry, if it is to serve the best interests of the farmer, must be an ingenious and highly aggressive industry. In the nature of the case it cannot be static. It must be forever inventing, designing and promoting. It must be flexible and adaptable to the changing needs of every situation. It is well that the farmer know these things and take account of them in his thinking about the future of cotton and about his relationship to the cotton textile industry.

Just as cotton is unique because of the number and variety of its uses as well as their changing characteristics, it is likewise unique among the major agricultural commodities in its vulnerability to competition from powerful and aggressive substitutes.

Substitutes for Cotton

The most important substitute for cotton is synthetic fibers, which until lately could be referred to as rayon. World production of synthetic fibers in 1938 was in excess of two billion pounds. On a strictly poundage comparison, this is the equivalent of about 4,250,000 bales of cotton. On the average, a pound of rayon has a greater coverage than a pound of cotton and, if due allowance be made for this difference, synthetic fiber consumption would be the equivalent of not less than six million bales of cotton. In the United States, on a poundage basis, synthetic fiber consumption has an importance of about 10% as compared with cotton, or the equivalent of 650,000 bales. For the world as a whole this percentage is much larger, approximating about 15%.

These comparisons viewed as a stationary relationship do not seem important and are certainly not alarming. The disquieting feature lies in the rapidity of growth which synthetic fibers exhibit and in the strength of the forces which are pressing them forward. Ten years ago the world poundage of synthetic fibers was only 360,000,000. Twenty years ago it was only 25,000,000. Moreover, the progress seems to be in geometric ratio. In the three years following 1931 the increase was about 50%; in the three years following 1934 the increase was 100%.

Up until the present, the truly phenomenal growth which has occurred in synthetic fiber production has been confined to the three totalitarian States, Japan, Germany and Italy. Ten years ago in 1928 these three countries

taken together produced but slightly more than the United States taken alone which at that time was the leading world producer. Yet in 1938 these three countries, Japan, Germany and Italy, combined produced 1,325,000,000 pounds of synthetic fibers which was about 65% of world production and almost five times as much as the amount produced in the United States.

New Fibers Dangerous To Cotton

A new impetus to American rayon production is in the making. This year's output will probably show a gain of as much as 25% over that of last year. Next year the trade will have the benefit of several sensational developments in chemical composition and physical qualities of synthetic fibers among which the two most important appear to be nylon and vinyon. Each represents notable advances in the tensile strength of fiber, in its elasticity, moisture and heat resistance. Moreover, they are susceptible to a great variety of finishes and can simulate all natural fibers with remarkable faithfulness.

Nylon is manufactured from a coal tar base and, hence, is completely divorced both from the vegetable and the animal world. Both of these new fibers have withstood rigorous preliminary testing, and, although they have not yet gone into large scale production, there seems no reason to believe that they will not come up to the expectations of their promoters. The extent of their encroachment upon cotton will, of course, depend upon the price at which they can be marketed, but on this point information is still lacking. We can be sure that the potential danger to cotton is very great and the farmers should take this into their calculations.

Important inroads upon cotton have also been made by paper and this invasion is still rapidly proceeding. All of us are witnesses to the wide and almost universal use of paper towels, napkins and table covers, but paper as a competitor of cotton has probably had its greatest success in the bag trade. Normally, about five hundred million yards of cotton cloth, which is equivalent to 6% of all cotton consumed, have gone into the manufacture of cotton bags. Now the tendency is toward a rapidly increasing use of paper bags for such important items as sugar, salt, flour and cement in addition to many others. In numerous stores consumers are now charged an extra price of as much as two cents for five pounds of sugar bought in a cotton pocket rather than in a paper bag.

In addition to this new competition from paper as a material for containers, cotton also protects itself with increasing difficulty from such substitutes as pasteboard cartons, wood crates and tin cans, all of which competition is primarily on a price basis.

War Has Been "Shot in Arm"

Temporarily, the loss of business to these competitors has been largely offset by the scarcity of jute arising from the second World War. There has been an additional offset from the scarcity of wool for the same reason. For the present, cotton bags are replacing jute bags in great quantity and woolen materials are making use of larger quantities of cotton yarn as a necessary admixture to meet an emergency situation. At the end of the war if it is prolonged, there will no doubt be great surpluses of wool and jute to be disposed of and greatly increased

production facilities for both which will speedily reverse the present favored position of cotton.

In 1927 mill consumption of cotton in the United States exceeded that of any previous year. A whole decade passed before that consumption peak was again reached or even closely approached. Moreover, the high rate of mill activity for the crop year ending in 1937 was largely speculative in character, was greatly in excess of actual consumer needs, was followed by eighteen months of subnormal activity, 20% below the peak of 1937. Once more the industry is operating at a high rate and once more hopes are flowering that King Cotton will heighten his throne. If these hopes come to fruition, it must be in spite of the adverse forces which I have recounted. Success cannot be accomplished by a program of drift or merely by wishful thinking. It will require the co-ordinated efforts of agriculture, of industry and of the Government. This should be possible if there is a mutual recognition of the long-range factors which are impersonal, realistic, cold, ruthless and enduring.

Cotton Manufacturers Sympathetic With Most of Farm Program

But there must be in addition an understanding of mental attitudes and personal reactions to given situations. The cotton manufacturers as a group are sympathetic with the general objectives of the agricultural program as it relates to cotton. They want the farmers to prosper because the farm population is an important consumer of cotton goods. There is the further consideration that 80% of the cotton-textile industry is located in the cotton-growing States and every mill executive knows from personal observation the importance of cotton as a factor in the social and economic well being of the community in which he dwells. Many mill executives own cotton farms of their own and most of them purchase at least a portion of their cotton requirement from local farmers who are their friends and neighbors.

They know from their own experience the deadly effects of unwieldy surpluses and chronic overproduction. Hence, they regarded with favor the acreage reduction program and the establishment of marketing quotas. They likewise recognized the necessity of compensation or benefit payment to farmers. They opposed the processing tax as a means of financing the payments in the honest belief that taxation for the support of so important a program should have a broader base. They felt that the concentration of this heavy tax burden upon cotton alone would tend to weaken the competitive position of cotton already imperiled on so many fronts and eventually bring about the destruction of the very objective that was being sought.

Will Resist Processing Tax

Our beliefs in this respect have not changed. We shall continue as forcefully as possible to resist a processing tax on cotton or any equivalent of a processing tax, not only in our own interests, but in the interest of cotton as an agricultural commodity and as an article of commerce. We believe that cotton cannot thrive or expand or grow great carrying upon its shoulders the dead weight of this "old man of the sea."

While observing with approval the general objectives

of the cotton adjustment program, the cotton manufacturer has not been unmindful of the similarity of his own problems and the sharply contrasting methods by which they have been dealt with. He noted that when cotton production was excessive concerted action under legislative authority brought about its curtailment. He also observed that when there were excess offerings of cotton in the market resulting in a ruinously low price, that marketing quotas were imposed under legislative authority. He likewise saw that when the raw cotton inventories were intolerably burdensome they were taken entirely from the market through the device of a Government loan under legislative authority.

Candy for the Farmer and a Club for the Manufacturer

These observations, though made approvingly, brought sharply to his mind that national policy when dealing with industry problems went into reverse. The cotton manufacturer also suffered from chronic overproduction, but if he tried to do anything about it through concerted action with his fellows he became automatically subject to indictment under the anti-trust laws. Moreover, any co-operative arrangement which he might endeavor to effect with his colleagues looking to an orderly marketing of factory output had no status under the law except that of a criminal act. Over long periods of time his prices were ruinous and goods were sold at heavy losses, but the law of the land prohibited him from engaging in any discussions or conferences the purpose of which was to improve the price status.

Prohibited and Restricted On All Sides

He was not only denied all concessions which might ease the emergency, he was further bound by a multiplicity of new regulations and prohibitions. The Fair Labor Standards Act prescribes for him hours of employment and the minimum wage rate which he must pay. The Walsh-Healey Act prescribes still another set of hour and wage regulations applicable to those enterprises engaged in manufacturing goods under Government contract. The National Labor Relations Act deprives the manufacturer of the right to deal individually with any of his employees when a majority of the employees have voted in favor of a particular union. He is also forbidden to influence or to attempt to influence by word of mouth, or by any act, the thinking of his employees with respect to any trade union. He is restricted as to the number of learners which he may have in his plant and the wages which they may be paid as is also true of the aged or physically handicapped workers. He must set aside a certain portion of his payroll as a tax to provide social security for his workers. He is entangled in a maze of laws, regulations, administrative rulings which touch virtually every act or movement which he may engage in as a manufacturer and employer.

I do not mention these things for purpose of criticism. They are referred to here merely to show the vivid contrast between our national agricultural policy and our national industrial policy. The two are as far apart as the poles. They contain no element of kinship. In every important feature what is right for the farmer is wrong for the manufacturer. What is right for the manufacturer

(Continued on Page 40)

Machinery Used In The Application of Fast Dyes To Cellulosic Fibers

By Ormand W. Clark

THIS paper will discuss from the viewpoint of the textile dyer and chemist, the factors influencing the design, selection, operation and maintenance of the machinery used in the application of fast dyes to cellulosic fibers. The following factors will be discussed:

1. The inherent nature of the fast dyes and the chemistry of their application as it affects machine design.
2. The essentials of a satisfactory dyeing process.
3. The dyeing processes at different stages of manufacture.
4. The evolution of dyehouse machinery, most of which has occurred in the last 15 years, and some possibilities of further improvement.

The Innate Nature of the Fast Dyes and the Chemistry of Their Application As It Affects Machine Design

In this discussion, the fast dyes are designated as those dyestuffs which are insoluble in water alone, but which, under the correct conditions, can be brought into solution and dyed on the fiber, and which, when finally fixed on the fiber, are quite resistant to removal by repeated washing and do not bleed into adjacent white material. It is characteristic of these dyestuffs that they are in a somewhat unstable state while they are being dyed and therefore the machinery for their application must be designed to avoid agitation or air exposure during the dyeing process so that the chemical consumption can be kept within economical limits.

The vat dyes are, in general, the fastest dyes obtainable. In order that they may be applied to the fiber they must be rendered soluble by converting them to an unstable leuco form in an aqueous solution of a strong alkali, usually caustic soda, and a powerful reducing agent, usually sodium hydrosulfite, at temperatures varying for specific dyestuffs from 75° F. to 180° F. The dyestuff absorbed by the fiber from this bath must be oxidized to a stable form to fix it permanently on the fiber and complete the process. This oxidation may be effected with air, dilute hot solutions of sodium bichromate and acetic acid, warm sodium perborate solutions, or cold ammonium persulfate solutions.

A modification of the vat dyes is sometimes used, consisting of a water soluble stabilized leuco dyestuff which after application to the fiber is rendered fast by oxidation in hot sulfuric acid sodium nitrite solutions.

The insoluble azo dyes, most widely used for fast brilliant red and wine shades, are insoluble in any medium

from which they can be dyed, and therefore they must be made upon the fiber from components which are soluble. The first component, called a naphthol, is dissolved in an aqueous caustic soda solution and dyed upon the fiber. The fiber is then treated in another bath with the second component, a diazo compound, whereby the dyestuff is formed within and upon the fiber. Thorough washing and soaping after-treatments remove the superficially attached dyestuff and produce a dyeing of very good fastness.

The sulfur dyes used chiefly for cheap black and brown shades are insoluble in water but can be dyed from hot, usually boiling, aqueous solutions of sodium carbonate and sodium sulfide. Subsequent thorough rinsing usually supplemented by after-treatment with hot dilute acetic acid, hot dilute solutions of sodium bichromate and acetic acid, or warm sodium perborate solutions, convert the dyestuff to a fast and stable form.

All of the above dyestuffs are often dyed in the same machine at different times. Also at times other processes may be conducted in the same machine using other chemicals such as sodium hypochlorite, nitrous acid, hydrogen peroxide, etc. It is easily seen, therefore, what difficult problems faced the manufacturer and user of dyeing machinery before the advent of chemically resistant alloys, and even now with what care the materials for dyehouse machinery must be selected and fabricated if maximum corrosion resistance is to be secured.

The Essentials of a Satisfactory Dyeing Process

1. The finished dyeing must be uniform and well penetrated with the full fastness obtainable from the specific dyestuff used.
2. The dyed fiber must be delivered in the correct physical and chemical condition demanded by subsequent processes.
3. The equipment should utilize efficiently water, heat, dyestuff, chemicals, labor, and floor space.
4. The equipment should be designed to give a high rate of production, as automatically as possible, with all variables automatically controlled and recorded, and should be sufficiently rugged and foolproof to enable operation by low grade labor without requiring frequent repairs.

The Dyeing Processes At Different Stages of Manufacture

Cellulosic fibers are dyed in all stages of manufacture,

Mill Properties For Sale

Having, for purpose of economy and efficiency, consolidated our equipment into a smaller number of units, we now offer for sale buildings and real estate formerly occupied by four units.

All are standard mill construction buildings with warehouses and service buildings of frame construction. All have heating and lighting systems, are sprinkled and are equipped with Parks-Cramer air conditioning system.

Will be sold for cash or upon reasonable terms.

Monarch Cotton Mills, Dallas, N. C.

On C. & N. W. Ry.

Main Building	1 Story	78'x244'
Main Mill Addition	1 Story	80'x108'
Card Room Addition	1½ Story	32'x67'
Toilet Tower	1 Story	15'x12'
Picker Building	2 Stories	78'x26'
Cotton Warehouse	1 Story	40'x80'
Also Opener Room, Waste House, Supply House, Boiler Room, Pump Room, Transformer House and Hydrant House.		

Mutual Mill No. 2, Gastonia, N. C.

Between Gastonia, N. C., and Kings Mountain, N. C.

Main Mill	1 Story	103'x102'
Main Mill	1 Story	69'x198'
One 2-Compartment cotton Warehouse, Sprinklered	1 Story	41'x42' and 40'x41'
Store House, Brick, Frame		12'x51'
Also Opener Room, Picker Room, Warper Room, Spooler Room, Boiler Room and Wheel House.		

Lockmore Cotton Mills, York, S. C.

On Southern Railway

Main Mill	1 Story	75'x275'
Card Room	1 Story	60'x69'
Picker Building	1½ Story	75'x25'
Cotton Warehouse, Sprinklered, Lights	1 Story	50'x88'
Office, with One-Car Garage	1 Story	17'x24'
Also Opener Room, Waste House, Supply House, Oil House.		

Wymojo Mills, Rock Hill, S. C.

On Southern Railway

Main Mill	1 Story	125'x270'
Picker Building	1½ Story	125'x32'
Cotton Warehouse, Sprinklered	1 Story	50'x104'
Also Boiler Room, Waste House, Truck Shed, Five-Car Garage and Tool House.		

Address Inquiries to

TEXTILES, INCORPORATED

Gastonia, North Carolina

as raw stock, laps, skein yarn, chain warp yarn, beamed warp yarn, package yarn, and piece goods.

Raw Stock Dyeing

The equipment used in raw stock dyeing offers a fertile field for improvement. Very large batches are dyed in discontinuous operations and with present-day equipment the dyeings are very uneven, requiring very thorough mixing of the fibers in a subsequent operation, or "blending," as it is called in order that a satisfactory fabric may finally be produced. It costs more to produce a given shade by blending unevenly dyed stock than it does to get the same shade by evenly dyeing the stock. Also, especially in compound shades, the match may not be accurate and raw stock from a different dye lot may have to be blended in, or in some cases, a special lot may have to be dyed so that it can be blended with the original lot as the only means of securing the desired shade. There is less opportunity to promote level dyeing by chemical methods in raw stock dyeing than there is in the case of dyeing fibers in other stages of manufacture due to the danger of rendering the raw stock unworkable in subsequent delicately adjusted mechanical processes.

The early method of dyeing raw stock by hand, poling it around in tanks of dye, has been superseded by two important types of equipment.

The first type is essentially a perforated metal cylinder containing the raw stock and revolving or oscillating horizontally, partially or totally submerged in a tank containing the dyebath. The raw stock from the bale, usually more or less broken up by passage through mechanical pickers, is loaded into the cylinder by hand, the uniformity with which it is packed depending on the attention devoted to this point by the very low grade labor. This machine produces fairly level dyeings, but due to the agitation, excessive amounts of expensive chemicals are required to keep the more unstable fast dyes in solution, and the long time needed to complete the several steps of fast dyeing processes tends to mat and twist the fibers forming what are known as "rat tails" and causing trouble in subsequent picking and carding operations.

The second type of machine reverses the principle of the above machine in that the raw stock is stationary and the dye-bath is circulated through it. The machine consists of a cylindrical tank with a removable perforated false bottom. The raw stock is packed into the cylinder by manual labor and the production of a satisfactory dyeing is greatly dependent on the uniform distribution and density of the load. A perforated metal cover is placed on top of the raw stock. The dyebath from an adjacent tank flows over the top of the load and a pump sucking from underneath the false bottom circulates the dyebath down through the stock and returns it to the top of the load. A variation of this machine has a cover which fastens over the top of the dyeing tank; and during the dyeing operation the entire vessel is filled with the dyebath, which can be circulated through the load under pressure.

The great advantage of this machine is the little mechanical effect upon the raw stock so that it leaves the dyeing operation well suited to subsequent processing. It also permits, without excessive consumption of expensive

chemicals, the use of the fast dyes which must be kept in a leuco state during dyeing.

The disadvantages are:

1. The difficulty of loading the machine with low grade labor so that uniform density of load is secured and detrimental channeling is presented and also so that too great density does not occur and interfere with the circulation of the dyebath.
2. The tendency of the load to act as a filter. Exceptionally clean and soft water and very pure dyes and chemicals are required.
3. The poor uniformity of shade usually obtained and the usually darker shade where the dyebath enters the load. Periodical reversal of flow instead of uni-directional flow disturbs the load and causes channeling.

Possible improvements in raw stock dyeing equipment would be:

1. A mechanical method of packing the raw stock more uniformly and more quickly.
2. A container for the raw stock which while not reducing the size of the load very much would give positive assurance of uniform load density and hence prevent either channeling or too slow circulation.
3. A multi-directional dyebath circulation without load disturbance.
4. Wider use of automatic controls and recording apparatus.
5. A continuous dyeing machine.

Skein Yarn Dyeing

The early method of dyeing yarn in skein form by suspending it from sticks laid across the top of a tub containing the dyebath and loading and working the yarn manually is still widely used, but the high labor cost, the variables introduced by the human element, and the general inefficiency of the method are resulting in the rapid introduction of mechanical dyeing equipment. Four types of skein dyeing equipment are in general use, although the first two are becoming obsolete.

In the first type the skeins are suspended radially from a horizontal cylindrical framework which revolves in a tank containing the dyebath. This machine is cumbersome to operate, inefficient in the use of water, steam, chemicals, power, and labor, and is poorly suited for the dyeing of unstable leuco dyes.

The second type of machine suspends the skeins from sticks attached to the cover of the dye vat, the bottom ends of the skeins hanging free in the dyebath. A propeller circulates the dyebath among the skeins. Steam, water and chemicals are utilized fairly efficiently by this machine but loading and unloading are cumbersome and sloppy, and the skeins tend to dye unlevelly.

An improved type of machine which permits the dyeing of several shades in one operation; which permits the use of leuco dyes, and which delivers the yarn in good physical condition, consists of a long tank which can be divided at will into compartments by removable partitions over which is erected a series of mechanically operated spools. The skeins are easily and quickly loaded upon the spools by slipping them over the protruding free end. The spools

(Continued on Page 36)



To wish you all a
clear road and fair
skies in the days ahead—
for us, the warmth of
your continued friendship.

HOWARD BROS. MFG. CO.

Harry C. Boley.
President



Products: Card Clothing for Woolen, Worsted, Cotton, Asbestos, and Silk Cards—Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Recovered and extra sets loaned at all plants—Lickerins

and Garnett Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant—Midgley Patented Hand Stripping Cards, Howard's Special Hand Stripping Cards and Inserted-Eye and Regular Wire Heddles.

Charlotte Plans Power Show

(Atlanta Journal)

Industrial leaders of enterprising Charlotte are projecting the first Southern Power and Engineering Show, which they plan to hold in their Armory-Auditorium October 8-12 of this year. They are starting early to insure the success of the exhibition and are actively soliciting the co-operation of other cities and sections.

The exhibition is planned, not as a rival to the established Greenville Textile Exposition, but as one which will have a broad appeal to Southern industry as a whole. At present the plan is to hold the show every other year, alternating with the Greenville Exposition. It is expected more than three thousand master mechanics and technical experts will find irresistible appeal in the showing.

The industrial and mechanical expansion of the South during recent years has been almost breath-taking. The reliable statistics of the *Manufacturers' Record* declare that today the value of the South's manufactured products is two and one-half times that of its agricultural output; that more than one hundred million dollars has been invested in two years in paper and pulp mills; that our 478 fertilizer plants manufacture 70 per cent of the nation's production, and that other industries are undergoing tremendous growth.

Such an exposition as is planned at Charlotte cannot fail to serve as an important experience meeting of executives and experts, and give new impetus toward efficiency and co-ordination of effort.

A. C. M. A. To Meet in April

The American Cotton Manufacturers' Association will hold its Forty-fourth Annual Convention April 25th-27th at White Sulphur Springs, W. Va., with headquarters in the Greenbrier Hotel, according to an announcement by K. P. Lewis, of Durham, president, through the Association's headquarters in Charlotte.

It was explained that the meeting place was selected after many conferences with members of the organization.

The program will include addresses by several men of national prominence in business and industry.

The announcement said the headquarters hotel offers excellent facilities for the convention and its broad grounds provide opportunities for many sports.

The regular pre-convention meeting of the Association's Board of Government will be held at 11 A. M., April 25th. The convention proper will open April 26th.

Adequate transportation facilities have been assured by the railroads for Association members who will travel by train, the announcement said.

In addition to Mr. Lewis, the roster of officers and directors include the following: R. R. West, of Danville, Va., and Fred W. Symmes, of Greenville, S. C., vice-presidents; W. M. McLaurine, of Charlotte, secretary-treasurer; S. M. Beattie, of Greenville, C. A. Cannon, of Kannapolis, J. A. Chapman, Jr., of Spartanburg, Herman Cone, of Greensboro, W. H. Entwistle, of Rockingham, Luther Hodges, of Spray, W. S. Montgomery, of Spartanburg, Harvey W. Moore, of Charlotte, George M. Wright, of Great Falls, and the following named Carolina men who are former presidents: Ellison A. Smyth, of Flat Rock; Stuart W. Cramer, of Cramerton, John A. Law, of

Spartanburg, Allen F. Johnson, of Greenville, C. E. Hutchison, of Mount Holly, George S. Harris, of Charlotte, A. M. Dixon, of Gastonia, B. E. Geer, of Greenville, B. B. Gossett, of Charlotte, and R. E. Henry, of Greenville.

Proctor Chemical Co. To Manufacture

Salisbury, N. C.—After operating a distributing agency here for textile chemicals for the past year and a half, the Proctor Chemical Co., Inc., has established a manufacturing unit here. E. E. Proctor is president of the company, which has leased a building here and special machinery along the most improved lines has been installed for the manufacture of textile chemicals and specialties. This new industry has gotten into operations.

Scheme To Get Commission On Cotton

Washington, D. C.—The Commodity Credit Corp. reports that it has uncovered a "fantastic scheme" of a Boston man to "victimize" New England warehousemen who might be awarded government-owned cotton for storage.

The corporation, in a formal release, said that the man, whose name was withheld, was endeavoring to procure, or had procured, an agreement from a group of New England warehousemen under which he would receive 10 per cent of the net proceeds they might obtain from storage of Government cotton.

Under legislation enacted last year, the Government is directed to transfer from the South some of its cotton to cotton manufacturing centers of New England for storage. The amount which may be transferred is not to exceed 300,000 bales.

The man was said to have based his request for such an agreement upon a representation that he had put through Congress the legislation directing this transfer.

Hartsville Print & Dye Works Plan is Completely Effected

The new 77-B plan for reorganization of Hartsville Print & Dye Works of Hartsville, S. C., which was confirmed by the U. S. District Court at Charleston, S. C., on November 1st, last, has been completely effected.

Checks covering 10 per cent cash payment to general unsecured creditors and notes maturing in 10½ years for the balance of their claims have been distributed.

With an RFC loan of \$255,000 and additional funds derived from the business itself, and persons interested in the company, the first mortgage bond issue of \$276,000, with interest at 6½ per cent from January 1, 1935, to December 28, 1939, has been paid in full.

Cloth From Their Cotton

A mechanic at a cotton mill in Alabama noted that a Texas shipment of cotton bore tags indicating it came from near Leonard, Tex., where his sister lived.

When cloth was made from the cotton the mechanic sent some of it, with the shipping tags, to his sister and she traced the growers through the tag numbers, making them a present of the cloth.

Preserve Your Mill Floors
Protect Your Employes' Health
by using

PINESOL Floor Dressing

A product made from PINESOL and so combined with other oils and waxes that it serves as a filler for the fiber and cracks, producing a hard finish and polishing bright when friction is applied. The PINESOL disinfectant incorporated in this dressing produces an antiseptic floor whenever applied.

Now Used in Over 200 Southern Mills

Pinesol Floor Dressing has been used for many years by many of the South's best known textile plants, all of which are enthusiastic in their praise of this product. Several that have used it over a quarter century, report that their floors are in better condition today than when the first application was made.

The "Flu" Epidemic Continues To Spread!

SAFEGUARD YOUR WORKERS WITH Pinesol Disinfectant

Easily Sprayed Through Your Humidifiers

ITS EFFECTIVENESS HAS BEEN THOROUGHLY PROVED

Used Every Winter For Years In Hundreds of Industrial Plants

Why Not Order a Trial Shipment Today?

Wire or Write

Jos. C. Shepard
Manufacturer

Wilmington, N. C.

Personal News

Henry Bruce is now superintendent of the Floyd Mills, Rome, Ga.

Clint Dowda is now an overseer at the Highland Cordage Co., Hickory, N. C.

Wm. P. Stewart has succeeded M. H. Walker as superintendent of the Dixie Hosiery Mills, Mt. Gilead, N. C.

Andrew A. Manning has been elected a director of the Union-Buffalo Mills, Union, S. C.

C. B. Wall is now general overseer of carding at the Profile Cotton Mills, Jacksonville, Ala.

George Hugeley is now night superintendent of the Bonham (Tex.) Cotton Mills. He was formerly with the Scottdale Mills, Scottdale, Ga.

Fred M. Shehane, formerly with S. Slater & Sons, Inc., Slater, S. C., is now general overseer of Draper weaving at the Stonecutter Mills, Spindale, N. C.

E. P. McWhirter, who has been master mechanic of the Monarch and Otteray Mills, Union, S. C., for the past 14 years, has resigned from that position.

H. H. Stevens, office manager of the Galax (Va.) Weaving Co., and Evelyn Mae Smith, of Burlington, N. C., were married recently.

T. A. Hightower, manager of The Kendall Co., Edgefield, S. C., has been appointed to serve on the advisory board of the Statewide Safety Council of South Carolina.

R. H. Hope, superintendent of the Erlanger and Nokomis Cotton Mills, has been named president of the Lexington, N. C., Civitan Club.

W. G. Armstrong is now overseer of carding at the Piedmont Cotton Mills, Egan, Ga. He was formerly at Columbus, Ga.

Jules C. Deerson is soon to become associated with Colonial Mills, with plants in Red Springs, and Hemp, N. C.

Murray Moore is now superintendent of the spinning department of the Swift Mfg. Co., Columbus, Ga. He was formerly with the Pepperell Mfg. Co., of Opelika, Ala.

B. W. Isom, assistant treasurer of the Beaumont Mfg. Co., Spartanburg, S. C., has been elected president of the Spartanburg Kiwanis Club.

E. A. Smyth, 3rd, president and treasurer of Balfour Mills, has been elected president of the Hendersonville, N. C., Kiwanis Club.

A. C. Smith, formerly of Stonewall, Miss., is now general overseer of spinning at the J. W. Sanders Cotton Mills Co., Meridian, Miss.

Leonard Howard, of Dunean Mills, Greenville, S. C., has resigned as an official of the Southern Textile Basketball Tournament Association.

J. E. Carter has been appointed general overseer of carding at the J. W. Sanders Cotton Mills Co., Meridian, Miss.

J. Spencer Love, head of the Burlington Mills Corp., of Greensboro, N. C., has been elected a director of the Central National Bank of Richmond, Va.

R. P. Morris has resigned as superintendent of the Albert J. Bartson Co., Charlotte, N. C., manufacturers of draperies.

J. H. Burgess has resigned as overseer of weaving at the Woodside Cotton Mills Co., at Simpsonville, and Fountain Inn, S. C., to become superintendent of weaving at the Gayle Plant of the Springs Cotton Mills, Chester, S. C.

PRECISION BOBBINS

Uniform in Quality

Uniform in Size

Uniform in Finish

NEW ENGLAND BOBBIN & SHUTTLE CO.
NASHUA **NEW HAMPSHIRE**

Sou. Repr.: E. M. POTTER, 914 First National Bank Building, Charlotte, N. C.

Henry B. Malone has been transferred from the New York offices to the Charlotte branch of the Ciba Co., dye-stuffs manufacturers. Mr. Malone is a graduate of Clemson and N. C. State College.

H. B. Kilmore, manager of the Brandon Corp., of Woodruff, S. C., has been elected vice-president of the newly-organized Woodruff Rotary Club. J. E. Reeves, superintendent of Mills Mill No. 2, was elected one of the directors.

Cyrus Pyle, who has been in charge of the industrial engineering at the Waynesboro, Va., plant of E. I. du Pont de Nemours & Co., has been transferred to Wilmington, Del., as consulting engineer of distillation for all du Pont plants.

A. B. Carter, Inc., Personnel Changes

W. A. Hunt, who has been for the past two years representative of the Carter Traveler Co., and the Mill Devices Co., Divisions of A. B. Carter, Inc., of Gastonia, N. C., in Georgia and neighboring States, has been promoted from a salesman in the above territories to be in charge of promotion of sales and supervision thereof in all the Southern States. Mr. Hunt is well equipped, having had a wide and thorough cotton mill experience in the manufacturing of a wide range of yarns and cloths. He was with the Bibb Mfg. Co. for six years as overseer of several of their plants, and was with the Callaway Mills for a period of nine years as overseer, and has held the superintendence of mills in Georgia, North and South Carolina and Alabama. Mr. Hunt will continue to operate from his present address, 410 Harwell avenue, LaGrange, Ga., and will continue to cover his present territory in addition to his other duties in the Southern States.

T. B. Hunt, who has held the superintendence of large mills in Georgia, Alabama and South Carolina, has recently joined the sales force of Carter Traveler Co., and Mill Devices Co., covering the South Carolina territory.

Harry E. Beck, who has been traveling in the Southern States for a period of years, is with the Carter Traveler

CLINTON STARCHES

FOR ALL
TEXTILE PURPOSES

Manufactured by

Clinton Company

CLINTON, IOWA

QUALITY

SERVICE

"FUEL SAVINGS

alone have paid back the cost
of our Powers control in less
than 3 years"



"...and it's helped improve
the efficiency and health
of our employees."

- Prevent OVER and UNDER-heating in your factory workrooms—offices and process rooms. Keep each room or department at the right temperature with Powers automatic temperature control . . . Powers control cuts heating costs 15 to 40%—Speeds-up production by increasing efficiency and output of workers—helps to improve the quality of products affected by temperature or humidity. Write for Bulletin 200.

THE POWERS REGULATOR COMPANY
Jefferson Standard Bldg., Greensboro, N.C.
Sales Offices in 47 Cities—See your phone directory.



Powers Type D
Thermostat

IND.

**POWERS TEMPERATURE AND
HUMIDITY CONTROL**

Co. and the Mill Devices Co., covering part of Tennessee, Virginia and North Carolina.

C. E. Herrick has been with Mill Devices Co. for a period of 17 years and is located at 44 Franklin street, Providence, R. I. He is now selling Carter travelers in the New England States and Canada, and is also a representative of the Mill Devices Co., as before.

Russell A. Singleton represents the Mill Devices Co. and the Carter Traveler Co. in Texas, Arkansas and Oklahoma. Mr. Singleton has been in the mill supply business for 18 years and is well qualified to handle these lines. He has represented Mill Devices Co. for a number of years.

A. Dewey Carter, who has been with the Carter Traveler Co. and the Mill Devices Co. from their beginning, upon the death of his father, A. B. Carter, has been promoted to the offices of president and treasurer of A. B. Carter, Inc.

E. Haines Gregg has been with the Carter interests for a period of years and has been promoted from secretary to assistant treasurer and secretary.

Ed L. Ramsey has been with the Carter interests for 17 years, and continues to be the plants' manager of production. He has recently been elected vice-president of A. B. Carter, Inc."

Emmons Appoints Clif Watson Manager of Southern Sales

Clifton E. Watson, for seventeen years vice-president of Watson-Williams Mfg. Co., of Millbury, Mass., has been appointed Southern sales manager for Emmons Loom Harness Co., of Lawrence, Mass., and Charlotte.

Mr. Watson, who has spent much time in the South and is widely acquainted among Southern mill executives,

will make Charlotte his headquarters and has already arrived here to take up his new duties. He is a graduate of Dartmouth College, class of 1922.

According to Mr. Watson, the Charlotte plant, established about two years ago, is now equipped to produce the same quality reeds that have been



manufactured at the Lawrence plant for 75 years. Geo. A. Field, who was sent here to establish the Charlotte branch, will continue as manager. William S. Taylor plant superintendent.

The Emmons Loom Harness Company is one of nation's largest manufacturers of reeds, heddles, bed frames, cotton harness and rawhide pickers.

David Carroll To Head Marlboro Cotton M

Bennettsville, S. C.—At a meeting of Marlboro Cotton Mills directors here, David D. Carroll, of Bennettsville, was elected president and treasurer; J. A. Baugh, Jr.

McColl, vice-president and general manager; E. H. McGregor, of Laurinburg, secretary.

The executive committee is comprised of D. K. McColl, of Bennettsville, and B. M. Edwards, of Columbia. The filling of vacancies was necessitated by the resignation of P. A. Gwaltney and F. F. Adams, of McColl, who recently became connected with the Plymouth Mfg. Co., of McColl.

Berlinghof Represents American MonoRail in the Carolinas

The American MonoRail Co., Cleveland, Ohio, has announced the transfer of R. G. Berlinghof, sales engineer, from the company's general offices to Charlotte, N. C., as representative of the organization in the Southern textile territory. The company manufactures conveying equipment for textile plants. Mr. Berlinghof will represent the company on all of its lines in the two Carolinas, and on cleaning equipment in Virginia. His Charlotte headquarters are in the Commercial National Bank Building. Curran S. Easley, LaGrange, Ga., continues as the company's representative in the Georgia-Alabama-Tennessee territory.

Textile Worker Held for Injuring Another

Burlington, N. C.—Jack Holt, textile employee, has been arrested on charges of injuring Joe Tyson, a fellow worker, during a strike in Plants A and B of Burlington Dyeing & Finishing Co.

Holt is charged with throwing a rock through the windshield of Tyson's automobile on November 20th and causing the injury which resulted in Tyson's losing his left eye. He is held in jail's Graham in default of





**ASHWORTH
PIONEERS IN
CARD CLOTHING**

apparently in good health, working at the mill until 10 o'clock and expired suddenly soon after returning to his residence, as a result of a heart attack.

Mr. Painter, a native of Gaston County, was reared in the vicinity of Mount Holly. He was engaged in the cotton mill business for most of his life, having served as superintendent of the East Monbo and other mills before going to Long Island five years ago.

ROBERT S. WHEELER

Chickamauga, Ga.—Robert S. Wheeler, one of the best known bleachery men in the South and former resident of Concord, N. C., died at his home here January 8th, where he had been critically ill for the last several days.

Mr. Wheeler was connected with the Kerr Bleachery in Concord for a number of years and later was identified with the Union Bleachery in Greenville, S. C., before moving to Georgia. He had been superintendent of Crystal Springs Bleachery at Chickamauga for about 20 years.

A. Q. KALE

Mt. Holly, N. C.—Abel Quincey Kale, 67, widely known in textile circles throughout this section, died at his home here recently.

Mr. Kale was for 27 years resident manager of the High Shoals Cotton Mill. After leaving that position he became superintendent of the Tuckaseege Mill here. He filled this post up until four years ago when his health failed.

CHAS. M. ROBINSON

Gastonia, N. C.—Chas. M. Robinson, age 52, died suddenly on January 14th at his home here. For some years past he had been associated with the Ruby Mills, Inc., as secretary.

A. H. KENNEDY

A. H. Kennedy, manager of maintenance sales of the Sherwin-Williams Co., with offices in Philadelphia, died January 10th in the Germantown Hospital, Philadelphia.

Mr. Kennedy had been calling with Sherwin-Williams' Southern representatives on the textile industry for 15 years and was a familiar figure at the regular Textile Exposition in Greenville every two years. He loved the South and the Southern people, who reciprocated his kindly feeling generously.

Mr. Kennedy was 70 years old and had been identified with the Sherwin-Williams Company for 33 years in various capacities.

**A NEW
Experimental
DEPARTMENT**

Let us experiment for you.

We can make test runs on several different types of card clothing, including Metallic Wire. Our enlarged experimental department now contains three makes of American Revolving Flat Cards.

We also use this department continually for our own testing purposes, seeking to improve old products and to perfect new ones.

Believing that research is the foundation of progress this company has always pioneered in exploring new fields.

**ASHWORTH BROS., INC.
Woolen Div., AMERICAN CARD CLOTHING CO.**

3 FACTORIES

3 Fall River, Worcester, Philadelphia

6 REPAIR SHOPS

6 Fall River, Philadelphia, Charlotte, Greenville,
Atlanta, Dallas

7 DISTRIBUTING POINTS

7 Fall River, Worcester, Philadelphia,
Charlotte, Greenville, Atlanta, Dallas

Southwestern Representative: Textile Supply Co., Dallas, Texas

★ PRODUCTS AND SERVICES: Card Clothing for Cotton, Wool, Worsted, Silk and Asbestos Cards and for All Types of Napping Machinery • Brusher Clothing and Card Clothing for Special Purposes • Lickerin Wire and Garnet Wire • Sole Distributors for Platt's Metallic Wire • Lickerin and Top Flats • Rosethread

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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

Power and Engineering Show

We are very much gratified at the response to our announcement that a Southern Power and Engineering Show would be held in Charlotte October 8th to 12th, 1940.

Letters have come from master mechanics, overseers, superintendents and mill officials, approving the plan and giving assurance that they would attend.

A salesman for mill supplies, dyestuffs, chemicals or cotton may take his samples with him, but most power plant and machine shop equipment is so heavy that it can not be carried and salesmen have to depend upon pictures and descriptions.

The Southern Power and Engineering Show will afford salesmen of such equipment an opportunity of displaying actual machines and demonstrating their advantages.

Many cotton mill overseers and superintendents are graduates of textile schools, but most master mechanics and machinists begin at the bottom, and there is no class of men who are as much interested in acquiring knowledge.

We are not guessing when we say that practically every master mechanic and machinist in Southern textile mills, including knitting mills, will attend the Southern Power and Engineering Show and will examine closely the machines and devices which are shown.

The Southern Textile Exposition, which is held at Greenville, S. C., every other year, has

factories, furniture factories, furniture industries.

Already considerable exhibit space has been contracted by manufacturers of power plant and machine shop equipment and there is assurance that all space will be sold.

Criticism Justified

The recent meeting of the American Student Union, which was held at Madison, Wis., fully justified the findings of the Dies Committee on un-American activities.

The Union declared Germany and Japan to be aggressors in their conflicts, but by a vote of 322 to 49, defeated a resolution to condemn Russia's attack upon little Finland and declare it "an act of aggression."

The Dies Committee, after investigation, had declared that the American Students Union was dominated by Communists, and even though 160,000,000 Russians are making unprovoked attack upon 3,000,000 Finns, the Union was not willing to offend their Russian sponsors by declaring it an act of aggression.

The leadership of the American Students Union seems to rest at the University of North Carolina, as a student from that institution was elected president and a co-ed was elected to a responsible position.

The young man who was elected president of this organization, which was so communistic that it refused by a vote of 322 to 49 to declare Russia an aggressor against Finland, is the son of an outstanding business man and patriotic citizen of South Carolina.

That the son of such a man could become the president of a communist controlled organization, shows again the work which is being done at Chapel Hill by a radical group of professors, all of whom draw salaries from funds provided by the taxpayers of North Carolina.

The action of the American Students Union in declaring Germany an aggressor but refusing to so declare Russia, is in keeping with the attitude of President Frank Graham, of the University of North Carolina, who, a few years ago, sponsored a summer school at Moscow University, but the next year opposed allowing young men to participate in the Olympic games in Germany be-

cause, while there, they might be given information about naziism.

President Frank Graham was one of a group who sent American young men to fight for the so-called Loyalists of Spain, who were Communists and had been placed in power by Russia. He also openly advocated lifting the embargo in order that arms might openly be sent them.

President Graham declared that his heart bled for the Loyalists in Spain, who were Communists, but, up to date, he has made no expression of sympathy for little Finland which is attacked by Russia.

The sympathies of President Graham and the American Student Union seem to be very flexible and never on the side of anything to which the Communists of Russia are opposed.

Cotton and Goods

The recent report of the Census Bureau shows that cotton mills in the United States consumed, during December, 1939, 652,629 bales of cotton, exclusive of linters, as compared with 565,627 during December, 1938.

During November, 1939, cotton consumed was 718,721 bales, as compared to 596,416 bales in 1938.

These figures show that November, 1939, consumption increased 122,000 bales over November, 1938, and December, 1939, increased 87,068 over December, 1938.

The increase of 209,000 bales during two months, when compared to a similar two months of the previous year, meant a tremendous increase in the production of cotton goods, and unless there is evidence of an approximately equal increase in the consumption of cotton goods, it is a real menace to the future operation of our mills.

Part of the consumption can be attributed to difficulty of obtaining jute for bags and part to the substitution of mercerized yarns for high priced silk, but an increase of 209,000 bales over a period of two months represents a tremendous increase in the volume of cotton goods and yarns produced.

We seem never to learn that a period of over-production always means months of low prices and curtailment during which accumulated goods are absorbed.

The day that mills find, that they can not continue full operations without booking additional orders, prices decline because buyers are quick to sense that a buyers' market has developed, in fact, they usually know it before mills realize the situation.

The thing most desired by cotton manufactur-

ers is the elimination of the mountains and the valleys of production and a steady operation at reasonable profits.

The figures cited above should constitute a warning to the industry.

The Pump Was Primed

A few years ago President Franklin D. Roosevelt and his New Deal advisors were telling the American people that it was necessary to squander several billion dollars, in order to "prime the pump" and that after the pump began to work there would be such prosperity as to justify the temporary waste of funds incident to the priming.

Having closed the books upon the year 1939 we can compare it with 1929.

Year	Population	National Income	Income Per Person
1929	121,500,000	\$79,500,000,000	\$617
1939	131,200,000	\$68,600,000,000	\$523

With national income \$10,900,000,000 below that of 1929 and taxation \$4,240,000,000 above that of 1929, there has been an increase of 83 per cent in the proportion of the national income which goes to taxes.

Year	National Income	Total Taxes Paid	Income Taken by Taxes
1929	\$79,500,000,000	\$9,760,000,000	12 per cent
1939	\$68,600,000,000	\$14,000,000,000	22 per cent

The 43 per cent increase in taxation, from \$9,760,000,000 in 1929 to \$14,000,000,000 in 1939, still was insufficient to meet the amounts spent by government. As a result, since 1929 government debt (national, State, and local) has increased \$30,000,000,000. Per person this is an increase of \$211, or 76 per cent.

Year	Government Debts	Population	Debt Per Person
1929	\$33,700,000,000	121,500,000	\$277
1940	\$64,000,000,000	131,200,000	\$488

After studying these figures, open old files and take a look at the propaganda of pump priming which accompanied the beginning of the wildest expenditure of public funds ever made by any country during a period of peace.

And the worst phase is that they have sold the public upon the idea that it is the duty of the Government to support the individual, and there appears little, if any, hope of putting an end to the policy of spending, each year, more than the national income.

Too True

The President should open his radio talks with "Fellow Deficitizens!"—*Life*.

Mill News

GLEN RAVEN, N. C.—The William Whitman Co. has been appointed selling agent for the greige goods products of the Glen Raven Silk Mills.

CANTON, GA.—Canton Cotton Mills, Plant No. 2, has recently completed installation of 540 K-A Electrical Warp Stops and are installing an additional 240 K-A.

SOUTH BOSTON, VA.—Final plans covering all structures for the 480-loom rayon weaving plant of Carter Fabrics Corp. here have been released by J. E. Sirrine & Co., Greenville, S. C., engineers, to the general contractor, C. M. Guest & Sons, of Anderson, S. C.

GRiffin, GA.—J. E. Sirrine & Co., consulting and designing engineers of Greenville, S. C., have awarded the piping contract for new de-aerating feed water heater at the Georgia-Kincaid Mill, Griffin, to Crawford & Slaten Co., of Atlanta, Ga.

GREENVILLE, S. C.—The F. W. Poe Mfg. Co., manufacturers of cotton prints and broadcloths, has increased the facilities of its weaving plant by the addition of a boiler from the E. Keeler Co. and a stoker from the Detroit Stoker Co., of Monroe, Mich., purchased by J. E. Sirrine & Co., consulting and designing engineers, also of Greenville.

MORGANTON, N. C.—At the Icard Cordage Co., Icard, work is going forward on the construction of a cotton warehouse which will enable the company to double its storage capacity. The building will be one-story and will be a twin to the present structure. The company is also constructing an addition to the general mill building, which is to be used as a stock room and shipping department.

SLATER, S. C.—An expansion program now in progress at Slater Mfg. Co. will result in the addition of 128 new looms to the plant, it has been learned. Changes are being effected at an outlay of several thousand dollars.

A new office building is being constructed between two divisions of the plant and the new looms will be placed in quarters now occupied by the mill office and in the weave shed.

Basement quarters are being enlarged for storage use and for placing of some of the old machinery in the mill.

GREENSBORO, N. C.—A charter has recently been issued to Cordell Hosiery Corp., of this place, to manufacture and sell all kinds of hosiery. Authorized capital stock is \$100,000, subscribed stock \$300, by Lou Silverstein, Lena R. Silverstein, and M. S. Amohundro, all of Greensboro. The company will engage only in selling, according to Mr. Silverstein.

TALLASSEE, ALA.—Tallassee Mills is installing K-A Electrical Warp Stops on 404 looms of various widths.

ROCKINGHAM, N. C.—Plans for building 10 new houses at Entwistle Mill No. 1 have been announced by William Harry Entwistle. The houses will cost around \$18,000.

EMPORIA, VA.—The plant which was formerly the Emporia Textile Mills, is now the Meherrin Mills Corp. The officers are R. W. Jordan, president; R. W. Little, secretary and treasurer, and B. Majer, superintendent.

ATLANTA, GA.—The Acme Mfg. Co. has opened a factory and offices at 187 Trinity avenue here. The company manufactures waterproof oiled silks and rubberized cloth products.

LUMBERTON, N. C.—Properties of the old Ada McLean Mill, west of Lumberton, will be disposed of under authority granted R. C. Adams, president of the Lumberton Investment Co., which now holds title to the former cotton mill village.

EASLEY, S. C.—The Hudson Narrow Tape Mill has been established on the Pickens Highway, near Easley, by Mr. Martin, of the Hudson Cotton Goods Co., of Greenville, S. C. Mr. Sauls, native of Greenville but an experienced mill man who has worked in Winston-Salem and other cities, will be in charge of operations.

LANETT, ALA.—Contract for two automatic cloth lifts to be installed in the Lanett Bleachery & Dye Works has been awarded to E. W. Buschman Co., of Cincinnati, O., by J. E. Sirrine & Co., consulting and designing engineers, Greenville, S. C. The lifts will operate from the first to the third floor of the Lanett works.

NEWTON, N. C.—Executives of Colonial Mills, Inc., have announced that title to the Mid-State Cloth Mills, their subsidiary here, has officially passed to the Burlington Mills Corp. Negotiations for the sale of this plant to Burlington commenced some time ago.

The purchase by Burlington includes 192 of the 240 looms in operation at Mid-State. The balance of 48 looms will be removed elsewhere by Cononial Mills.

With the completion of this transaction, Colonial Mills state they will concentrate their rayon goods manufacturing activities at two plants, the Pinehurst Silk Mills, at Hemp, N. C., and at the Red Springs Weaving Co., Red Springs, N. C.

Improvements and additions to the Red Springs unit are now nearing completion and the first of a total of 600 new Draper XD, high-speed automatic looms is already in operation. The new plant is described as the last word in modern equipment.

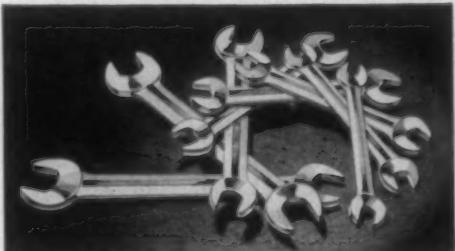
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• Fiddling Fixing or Heavy Maintenance work . . . one's as easy to handle as the other when you use a Snap-on wrench for the job. These quality tools are built as carefully as the finest loom. Here are tools that look right and feel right because they are designed right.

Ask the Snap-on salesman to show you these wrenches—see how accurately they fit the bolt head—how balanced they feel—note how the small, thin heads can work in very close places—compare them with other tools you have used. Treat yourself to greater working satisfaction with a Snap-on Open End Wrench Set.

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*Xynomines are produced under U. S. Patent 1918373. Other patents pending.

Geo. Bahan Has New Stop Motion

Geo. F. Bahan, who has been the well known and popular Southern sales manager of the Emmons Loom Harness Co. for about thirty years, resigned that position on January 1st to organize the Bahan Engineering Co. for the manufacture and marketing of an electric stop motion which has been invented by him and which he calls the "Double Duty Hed-L-Drop Stop Motion."

For a number of years Mr. Bahan has spent his week ends in a small shop, working upon this stop motion, but only recently felt that it had been perfected and was ready for the market.

He calls it a "double duty" system because the heddles also act as drop wires and, when an end breaks, make the electric contacts.

Mr. Bahan has developed a very rigid heddle frame upon which heddles of any standard flat or duplex make can be placed. When an end breaks the heddle, which held same, drops slightly and when it contacts a floating feeler, an electric circuit is sent to the knock-off motion on the live frog of the loom. Mr. Bahan claims that the loom stops quicker after an end breaks than under any other system.

He maintains that, with the very best heddles and the best drop wires, the passage of the yarn through them results in a certain amount of friction and chafing and a certain amount of sizing being knocked off the warp.

He also maintains that by substituting a combination heddle and drop wire for both a heddle and a drop wire, the friction and chafing and the loss of sizing are greatly reduced.

Allowing the warp threads to go directly to the heddles reduces the tension and a floating feeler, which constantly follows the shed, makes it much easier to keep the warp at uniform tension and better cover upon the cloth is the result.

During the past year Mr. Bahan has placed his system in numerous mills and on goods from 1 to 9 yards per pound and from 36 to 72 inches in width.

The Bahan Engineering Co. now occupies space at 1718 Dowd Road, Charlotte, N. C., which is part of the building which was formerly the Elizabeth Cotton Mills. They have a loom equipped with the "Double Duty Hed-L-Drop Stop Motions" and states that they will take pleasure in giving a demonstration, at any time, to any mill man who is interested. They are now in position to take orders for early delivery.

Crompton & Knowles Plans Addition

Worcester, Mass.—Ground is soon to be broken for the erection of a \$35,000 addition to the forge shop of the Crompton & Knowles Loom Works, according to John F. Tinsley, president and general manager of the company.

The proposed new plant will be a single story building and add 15,000 square feet of floor space to the forge shop.



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Your textile mill is an incurable soot. Every manufacturing operation creates thirst in the room air.

To satisfy this continuous and almost unquenchable thirst, many a mill has use for tons of humidified air—every hour. (Know of one that uses nearly 500 tons of saturated air every hour in one department only.)

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Because we make a complete line of humidifying (and Air Conditioning) devices, we are the better able to make unbiased recommendations.

Air Conditioning is bought as an investment—as a useful manufacturing accessory. Only with the right devices coupled with experience to guide right application can you get everything such an investment can bring.

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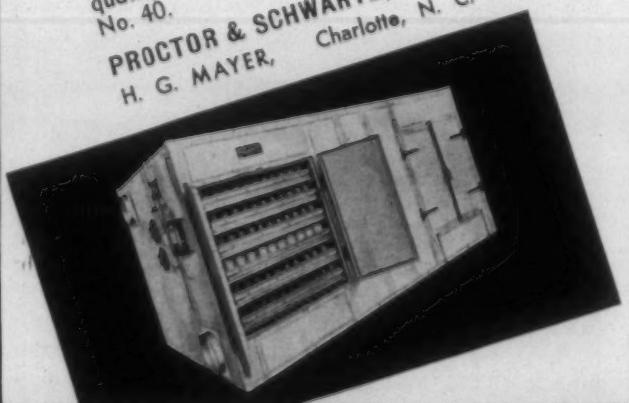
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Cotton Goods Markets

New York.—The first week of the new year contributed little to those merchants who were looking for definite signs of trend or tendency in the cotton gray goods departments of this market. Activity was scattered and the tone of prices mixed. Very few sellers had, in fact, anticipated a substantial influx of new business so soon following the holidays, but at least one development was slightly disappointing and that was the easing of print cloth prices.

Because this shading of prices was apparently isolated—only a few centers engaged in it and they not loosely or freely—there was an inclination among buyers to watch the situation somewhat longer before drawing conclusions. Hence, as the week closed the print cloth section again found itself in a waiting state.

The most significant event of the week, from a long-term standpoint, was the filing of a "criminal information" suit against the print cloth manufacturers by the Department of Justice on a charge that these producers had last summer violated the Sherman Anti-Trust Law.

Irrespective of the outcome—and many observers believe the manufacturers will be able to prove their innocence of intent—merchants were keenly disappointed by this action, which they regarded as one more setback to the course of enlightened co-operation.

The litigation, it was seen, demonstrates anew that the law in its present form offers little hope to those industrial groups which, suffering from chronic over-production, would like to find legal means of halting the destructiveness of their condition. It is irrational, merchants declare, to classify industrialists faced with such a problem along with those offenders who, like the petty racketeers of the building trades, openly practice economic inequities.

Buyers displayed enough interest in gray goods the week ending the 13th to indicate to merchants and mills that there is a strong likelihood of a fairly active demand springing up at once. Most of the bidding was plainly for the purpose of testing mills and disclosed that producers were not disposed to reach for business, especially when it meant a further diminution of manufacturing margins that already are too narrow for comfort.

With finished goods swinging into better demand and all types of cotton goods facing the most active selling months, merchants cannot see how buyers can afford to delay placing commitments covering at least part of their requirements for the next three months.

J. P. STEVENS & CO., Inc.

Selling Agents

40-46 Leonard St., New York

Cotton Yarn Markets

Philadelphia.—Relatively few yarn buyers were in the market during the first ten days of the new year. Most of them preferred to take no action in covering against needs, for nearly all have enough yarn to take care of immediate manufacturing schedules. Repeatedly, spinners have received requests for smaller weekly yarn shipments. These were at times the result of similar delivery deferrals among yarn consumers' customers. There was little to differentiate the practice from what would be called normal at the start of any year.

Because of smaller production demands on spindles there came into view a little more yarn than had appeared available. Spinners included those who had somewhat overestimated their sold ahead condition. Among these the view was occasionally voiced that they could accommodate new contracts involving deliveries starting shortly. Where buyers had anticipated opportunities of the kind the disposition was to wait to see how it all would work out in terms of price advantages.

Yarn users who have been accustomed to figuring prospective yarn costs on the basis of certain counts, confident they could get other counts within a certain definite range, are finding that spinners show no signs of returning to this way of pricing. That is, single yarns no longer bear any relationship to ply yarns that spinners are willing to recognize.

This is said to be due to demand concentrating on types of yarn for which there is not enough twister capacity. Spinners take advantage of such "bottle necks" in times of heavy buying, such as last September and October, in order to base their quotations on the availability of production, rather than on the relative costs of producing ply yarn, as compared with singles.

The average size per order has enlarged somewhat since the turn of the year, but new buying evidently is not being uniformly experienced, as some distributors report a gain in inquiries, but no improvement in buying. On the other hand, some houses claim to be getting more orders in the neighborhood of 50,000 pounds, with a few larger.

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Continuous Growth of Nitro Rayon Staple Fiber Plant Told

Charleston, W. Va.—Three years of continuous expansion has almost doubled the physical size of the American Viscose plant at Nitro, W. Va., near here and increased its production capacity for rayon cut staple to more than 40 million pounds annually.

The last addition of five buildings started in late 1937 and costing five million dollars is practically finished and equipment installed is now in operation. The addition includes a laboratory, machine shops and office buildings. A modern cafeteria and medical unit will be added, it was announced by company officials.

S. C. Workers Obtain 57½c Of Cotton Cloth Dollar

South Carolina's textile industry returned to its workers in 1937, 57.5c in wages for each dollar added to the value of the product during the manufacturing process, while the average for all other industries in the State was only 39.4c, according to figures based on the latest census of manufactures of the United States Department of Commerce.

The textile industry and its various branches paid a total of \$71,791,070 in wages in 1937, and the value added by manufacture came to \$124,878,696. The combined wages of all other South Carolina industries, on the other hand, came to \$20,000,622 and value added by manufacture was \$50,599,456.

According to the Department of Commerce, valued added by manufacture is computed by subtracting from the value of the product the cost of materials, containers, fuel, purchased electric energy and contract work.

Although the value added by manufacture provides an excellent yardstick for measuring wage-paying ability, it does not take into account cost items such as taxes, interest, rent, depreciation, advertising and insurance. It is therefore impossible, the department shows, to compute profits or losses from the census figures.

Subindustries included in figures for South Carolina's textile industry were cotton woven goods over twelve inches in width; cotton yarn and thread; dyeing and finishing of cotton fabrics; hosiery; rayon broad woven goods; shirts, collars and nightwear.

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More Cotton Sugar Bags

Cotton sugar bags are again in a strong competitive position in the eyes of the retail trade! This is due in a large measure to the fact that on

December 4, 1939, cancellation was made of the differential previously prevailing for several years of five cents per 100 pounds extra for the delivery in cotton container bags, known in the trade as "covers," of sugar put up in two, five, 10 and 25-pound capacity cotton sacks or "pockets." Second-hand bag dealers in New York City and elsewhere are offering six cents per bag for the emptied cotton container bags.

Taking into account the recoverable value of the cotton covers, the five-pound and 10-pound packages of sugar put up in cotton pockets now cost the retailer but a small fraction of a cent more than if the sugar were packed in paper sacks. Cotton bags, because of their soft and flexible character, and because of a larger and better gripping surface, are capable of withstanding considerably more handling and stacking and with considerably less danger of tearing or bursting than substitutes recently introduced. The loss from spillage from cotton bags is practically nil even though through careless handling or accident the sugar so packaged is pushed off tables or counters or allowed to drop on the floor.—From a report by the Cotton Textile Institute, Inc.

Develop New Sizing For Spun Rayon Warps

Charlotte, N. C.—E. F. Houghton & Co., of this city and Philadelphia, announces that a new, tested sizing compound for spun rayon warps and mixtures has been developed by the company. This product, known as Houghto Size SR, is said to work with any type of starch or gum used for spun rayon sizing. Its advantages announced by the manufacturer include high breaking strength, elasticity, increased weave room efficiency, easy boil-off and low cost because of the concentrated nature and solubility of the softener. From 6 to 7 per cent of Houghto Size SR, based on the weight of starch or gum, is employed in the sizing formula. According to the manufacturers, the brilliance of dyed warps is not affected by the softener.

Tubize Chatillon

Declares 2 Dividends

The board of directors of Tubize Chatillon Corp. declared a quarterly dividend of \$1.75 per share on 7 per cent cumulative preferred stock, payable January 2, 1940, to stock of record December 20, 1939.

Machinery Used in the Application of Fast Dyes To Cellulosic Fibers

(Continued from Page 18)

revolve on their own axis and being also mounted on an eccentric, rotate elliptically moving the skeins up and down in the dyebath. This type of machine has a very high first cost, but utilizes materials and labor efficiently, is suited to all classes of dyestuffs, and delivers the yarn in good physical condition.

A very efficient type of apparatus, but well suited only to certain types of fast dye, consists of perforated spools suspended over a dye vat. The yarn is easily loaded over the free end of the spools. The dyebath is sprayed through the yarn from the perforations in the spools and flows down the skeins and drops into the dyebath. This machine dyes rapidly and efficiently in all respects, except that those fast dyes which are applied in the leuco state and which oxidize rapidly if exposed freely to the air require excessive amounts of chemicals on this apparatus; and it is therefore not well suited for vat dyeing.

Package Yarn Dyeing

To still further reduce dyeing costs by eliminating operations, utilizing materials and labor more efficiently; to secure more positive control over the variables in dyeing processes; and to produce more evenly dyed and better penetrated yarn in the best physical condition, the trend is towards the dyeing of yarn under pressure in large enclosed machines. The yarn is wound upon hollow perforated tubes, perforated spools, or springs. These are placed over perforated, or cruciform, or spirally fluted spindles connected to a removable header which can be inserted into a cylindrical tank with a cover which can be bolted on. The dyebath from an auxiliary tank is circulated by pump, radially through the packages, with periodic reversal of flow.

Formerly at the completion of dyeing these packages had to be removed from the spindles by hand, extracted in a basket type centrifugal extractor, and then dried in a heated chamber. The drying took from one to two days. The most modern types of machines blow out the easily removed water from the packages still mounted on the spindles and then dry the packages in a few hours by circulating hot air through them, continuously removing excess moisture from the air and recirculating it.

The production of satisfactory dyeings in these package machines is greatly dependent upon the correct winding of the packages to secure the proper placement of the yarns and the proper density so that the circulating dyebath under pressure contacts every portion of the yarn uniformly. Highly developed winding machinery, with careful operation delivers very good packages, and the packages are further improved after winding by rounding over the ends in a cup shaped mechanical device.

The circulating system must be well maintained so that leaks are prevented. This problem has been ingeniously solved in one case by single unit, welded construction, with the pump submerged in the dyebath.

The tubes upon which the packages are wound are one of the less satisfactory parts of the equipment. The size of the tubes; the size, shape, and distribution of the perforations; and the materials out of which they have been made vary with the equipment of different manufacturers,

and the quality of work and adaptability of the machine to different dyeing problems is to some extent affected by the tubes. The ends of the tubes which protrude from the package are easily damaged by careless labor; and then, seating unevenly on the header bushings, they cause imperfect circulation. Even stainless steel tubes are prone to damage if fabricated from very thin gauge metal in the effort to reduce cost.

Warp Yarn Dyeing

Warp yarns are dyed on equipment similar to that used in package yarn dyeing except that the spools on which the yarn is wound are very much larger so that an entire warp beam can be dyed.

Warp yarns are also dyed to some extent in long chain form; that is, a number of strands are paralleled together lengthwise. These bundles are then doubled and redoubled to produce a bundle of strands 1,000 to 1,500 feet long. A machine consisting of several compartments with rubber covered squeeze rollers mounted between them contains the dye. The warp is guided through the dyebath by immersed guide rollers, the squeeze rollers between each compartment aiding penetration and levelness. Light and medium shades may be dyed in a single passage; dark shades require several passages.

These warp dyeing machines are usually of rather crude construction, lacking refinement of feeding methods for the dye and devoid of automatic control devices, and the uniformity of shade from end to end of the yarn varies with the difficulty of the dyeing process and the skill and judgment of the operator.

Piece Goods Dyeing

For the production of solid fast color shades, the dyeing of piece goods steadily acquires greater importance. The advantages of dyeing raw stock, notably high fastness due to excellent penetration and uniformity of shade of the entire yardage of piece goods woven from a well blended lot of raw stock, have gradually been approached by the intensive improvement of piece dyeing machinery and methods. The great disadvantages of raw stock dyeing; huge investment in space and equipment, large inventory, lag of time between the placing of an order and its fulfillment, and the inevitable loss of some dyed material during manufacturing processes have caused great attention to be focussed on the improvement of piece dyeing machinery. The chief types of machinery used in the fast color dyeing of piece goods are jigs, paddlers, and continuous ranges; all of which process the fabric in the open width.

Jigs

The jig is used where considerable time is required for the absorption of the dye due to the nature of the fabric, the depth of shade, the inherent properties of the dyestuff, or the necessity of a prolonged dyeing process to secure maximum dyestuff fixation. In its simplest form it consists of two beam rollers suspended above the sides of a dye vat equipped with immersion guide rolls. Either beam roller can be revolved so that a roll of cloth wound around one roller can be drawn through the dyebath and wound up on the other beam. A leather strap fixed at one end runs over a pulley attached to the beam roller; and

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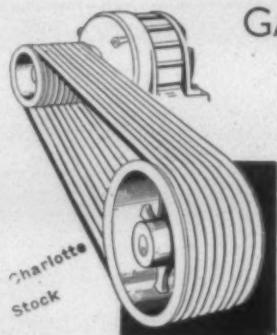
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the braking friction is adjusted by weighting the free end of the strap. The cloth can be given as many passages back and forth as desired.

In its crudest form, and altogether too many of these still are in use, the jig consists of a wooden dye vat of about 100-gallon capacity with wooden guide rolls. A metal gudgeon about 1½" in diameter in the ends of the guide rolls rides in a plain bearing, often a hole bored in a block of lignum vitae, hard rubber, or bronze. The beam rollers, about 6" in diameter, turn in plain babbitt bearings, and are set into motion by engaging cast iron bevel gears on the end of their shaft with bevel gears on the drive shaft, either without benefit of clutch mechanism or with only the aid of a crude friction clutch. A metal plug seat with a 1½" opening is screwed into the bottom of the jig and a wooden or metal bung is knocked out when it becomes necessary to empty the jig. A perforated steam pipe lies along the bottom of the jig to heat the dyebath. These execrable pieces of machinery were the typical and widely used type of jig until the advent of synthetic fibers and the increase in the use of fast dyes rendered them unsatisfactory even to the complacent textile finishing industry. The wood absorbed dye and chemicals and carried traces of them from one operation to the next; the wooden vats developed leaks; the plugs developed leaks; the guide rollers warped; the bearings wore quickly forcing the guide rollers out of line; the abrupt meshing of gears strained the entire mechanism and was detrimental to the cloth; the time to empty and fill the vat was excessive; the liquor splashed over the floor and over the operators; the cloth traveled through the dyebath too slowly at the start and too rapidly at the end of a passage; the tension on the cloth could not be controlled accurately, and the clashing of the ill-fitted mechanical parts of a group of jigs created a terrific din. The evolution of these crude mechanisms into the modern, highly refined jigs is a development of comparatively recent years.

The most modern jigs are of all stainless steel construction. The dye vat has a large plug, externally operated by levers, or a large valve, so that the emptying of the dyebath is very rapid; a point of importance from the viewpoint of both effective jig operating time and from the viewpoint of minimizing delays in completing dyeing reactions. Troughs built in at the edges of the dye vats conduct overflowing liquids to the sewer and keep the floor and operatives dry. Light weight rollers, with large gudgeons to increase the wearing surface, run in self-aligning ball or roller bearings, maintain their true running condition for a long time, and in keeping the dyeing fabric in accurate position through many passages. Both the take-up and let-off beams, preferably 12" in diameter, are simultaneously driven through differential mechanical or electrical mechanisms with the speed of each beam adjustable so that tension on the cloth can be accurately varied and controlled. The driving mechanism constantly changes speed so that the cloth passes through the dyebath at a uniform rate regardless of the varying size of the roll of cloth. The jig can be set to automatically reverse the direction of operation a given number of times and to stop after a predetermined number of operations. It can be set to automatically oscillate the cloth at the end of a passage so that the roll of cloth is kept in motion while further processing is temporarily in abeyance, and

the liquor retained in the interstices of the cloth does not drain to the bottom of the roll and cause unbalance in weight or dye stains. Expanders keep the fabric smooth and wide open so that it dyes uniformly. A perforated steam pipe with a double row of holes and rigidly clamped to prevent change of position caused by vibration from ejecting live steam upon the cloth is used to bring the dyebath to temperature. A thermostatically controlled closed steam pipe maintains the dyebath at temperature without dilution by condensing steam or from condensate in the supply mains.

The ideal jig should incorporate the following features of construction:

1. In view of the high cost of equipment embodying the most advanced features, it is imperative that it should be adaptable to a wide variety of fabrics and processes.

2. All materials of construction which come in contact with corrosive liquors should resist all of the wide variety of chemicals used in processing cellulosic fibers.

3. The metal used for the rolls and vats should be of sufficiently heavy gauge to withstand considerable mechanical abuse by low grade labor.

4. The framework carrying the brunt of the load should be rugged and free from brittleness so that it does not distort or break under the impact of wet fabric rolls which may weigh 1,000 pounds. Repeated stress should not develop fatigue failures.

5. The dyebath outlet should be large, 5 or 6 inches in diameter. The plug should seat accurately, should maintain a true seal for a long period of use before replacement is required, should not stick from temperature changes or vibration, and should operate easily by external and convenient means.

6. The driving and braking mechanism should be sufficiently rugged to withstand operation by low grade labor without constant adjustment by skilled mechanics. It should be designed to stand the stresses of starting and stopping rolls of cloth weighing, when wet, up to 1,000 pounds, and which may be out of balance.

7. The bearings of the immersion rollers should be large in diameter, at least $1\frac{1}{4}$ " in diameter, for they work under severe conditions, exposed to corrosive chemicals and friction at elevated temperatures without benefit of adequate lubrication, and sometimes run entirely dry. In dyeing fast colors, the cloth must run for a long time with coincident selvedges, and any deviation of the guide rollers from parallelism will shift the cloth out of line.

8. The so-called tensionless jig is essential for certain types of fabrics; but for other types of fabrics, with the expanders now available, considerable tension is necessary to keep the fabric smooth, although tension is inimical to perfect dyeing. With present types of expanders, a wider range of tension should be available on the so-called tensionless jigs. The most desirable improvement, however, would be a more efficient type of expander to handle the more difficult fabric constructions without resort to heavy tension.

Various modifications of the jig have been designed for special purposes such as the use of a smaller volume dyebath, a longer passage through the dyebath, protection of the cloth saturated with unstable leuco dye from oxidation in the air, and increased dyestuff penetration.

(To be continued)

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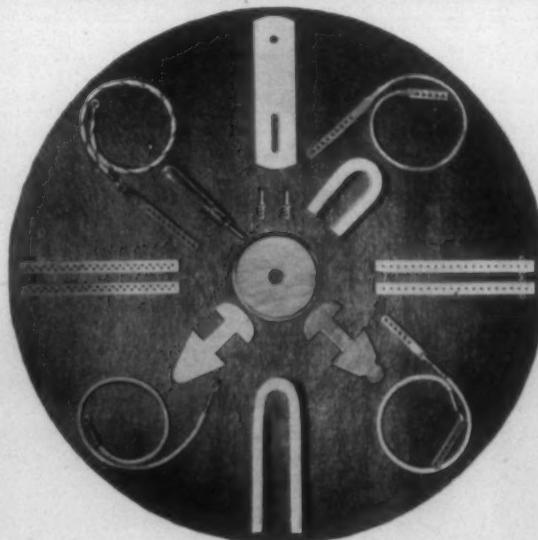
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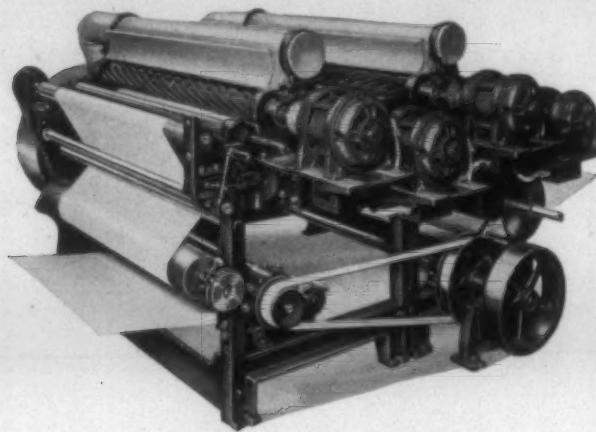
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The Cotton Manufacturer and the Cotton Farmer

(Continued from Page 15)

is wrong for the farmer. Without prejudice to either policy and without prejudice to either group, I cannot bring myself to believe that this fundamental antagonism of the two policies in thought, law and procedure is a sound basis of national stability and prosperity.

Mill Man's Problem

But for the moment at least and, no doubt, somewhat longer we must accept the situation as it is. So, let us look a little further into the mind of the mill executive. Let us envision him as he sits at his desk. Let it be anywhere in the country and on any day during the past two years up to last August. He is looking over his production schedules, his inventory sheets, his sales reports, his profit and loss accounts. His inventory is heavy and has a market value less than its replacement cost. His current sales are being made at a loss. The situation has been almost as bad for a year and a half. He is heavily indebted to the banks; the corporation capital is rapidly being impaired. If his plant is of average size, it has an importance in the industry of less than one-half of 1%. There isn't much he can do by himself. To curtail his own production without similar action by others would not improve the general situation. It would only mean turning out his own workers for the relief rolls and disrupting his organization.

There comes into his mind with fresh insistence a temptation which has been there before, but was dismissed. It now presses itself upon him with the force of grim necessity. It is his duty to his stockholders and his employees to try a new venture: spinning and weaving synthetic fibers for a market which is not drugged. He calls in his superintendent to compute the number of spindles and looms which should be diverted from cotton for the first experimentation in the new undertaking. He confers again with a market expert, with the producers of rayon staple, places his order for the first consignment of the synthetic fiber. Within a few weeks another ten thousand spindles, or another hundred looms have been lost to cotton.

If the cotton manufacturer happens to be engaged in the bag business and finds himself unable to compete with the growing menace of paper bags, he may have no choice but to set up a plant for manufacturing paper bags and so join the crowd which he couldn't lick.

Cotton Textile Industry Will Change

These individual instances seem unimportant when they happen, and are regarded as matters of individual choice without any particular significance. But within a period of four or five years such instances add up to a total sufficiently great to change the complexion of an entire industry and give to all beholders the impression that a great, irresistible and impersonal force is in operation, carrying with it the implications of a new industry, a new era.

The conclusion is obvious. The competitive perils which beset cotton do not endanger the textile industry. If they prevail they will merely compel the textile industry to change gradually the character of its raw material.

I do not wish to convey the impression that the cotton-

textile industry is acquiescent to any such development. Its tradition, its experience, its sentiment, its regard for the economic soundness of the region which it inhabits preclude any possibility of preference for any competitive material other than cotton. Certainly the farmers knowingly will not be party to any movement or any device which will betray the products of the field to the products of a coal mine or a slash pine. This mutuality of interest and sentiment should bring cotton farmers and cotton manufacturers into a common determination to keep cotton free of those specific and artificial burdens, such as the processing tax, which impede its free flow into consumption; and to demand that funds for the cotton adjustment program be derived from taxation which is general in scope and non-discriminatory in effect.

So long as emergency conditions prevail in cotton farming, the manufacturers have no quarrel with the conception of "parity price." They recognize that some such computation is necessary as a reference point in the administration of a program which requires compensation or benefit payments. However, we do wish to urge upon the farmers and upon the legislative authorities the importance of re-examining from time to time the manner of computation. The base period now in use is a quarter of a century old. In that period revolutionary changes have occurred in prices and in price relationships both in agriculture and in industry. They have been occasioned by technological changes of a sensational character and in most commodity classifications the price comparisons of twenty-five years ago are utterly meaningless.

The individual cotton manufacturer determines whether a given price is satisfactory not by the actual amount which he receives for the goods, but by the difference between that amount and his cost of production. For the cotton-textile industry as a whole production costs vary so widely that no single figure which could be arrived at would be fairly representative so we content ourselves by calculating from week to week the difference between the selling price and the cost of the raw material. Since selling

prices for given cloth classifications are fairly constant on any given day, and the cost prices of raw materials also substantially the same at any given time, the difference between the two is considered an index of whether prices are fair or not and is called the manufacturer's margin.

Taking out of this manufacturer's margin its own labor cost and other expenses over and above raw materials, the individual enterprise can gauge its own position in the market. If the high cost and most inefficient mills cannot over a long period of time bring their total expenses within the bounds of the manufacturer's margin, they have no choice but to abandon operations.

No doubt in cotton growing, divergencies of cost are even greater than in cotton manufacture. The developments of the past few years have greatly increased these divergencies. I have been greatly enlightened in these matters by the recent researches made and published by the Research Division of the WPA under the direction of Mr. Corrington Gill. These researches have had to do with the progress of mechanization in agriculture. They are earnestly recommended for the perusal of all agricultural students and leaders. They indicate that on the larger farms there has been great progress in mechanization. Agricultural output per man-hour has greatly increased in consequence. Cost of production per unit of output has declined. On smaller farms this is true to a less extent.

As we all know, the same developments have been occurring in industry, though with great variations from one industry to another. For technical reasons, the parity price idea could not justifiably be applied to the automobile industry, but might conceivably be applicable to saw mills.

The farmer, like the industrialist, measures his welfare not by the price which he receives for his product, but by the difference between that price and his cost of production. If, over the years, the cost of cotton production declines through more efficient methods, the farmer, just as the industrialist, wishes to use that advantage to lower

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his price, increase his volume and strengthen his competitive position. I believe cotton should be grown on only the most efficient land and under the most efficient methods, and that legislative policy and administrative practice should combine to encourage this objective.

Without such an attitude and without such a procedure, all efforts and all expenditures for the preservation of cotton as our supreme crop will be ultimately wasted and wholly in vain.

Cotton farming and cotton manufacturing are a single industry one and indivisible, and our thinking must be in conformity with this fact.

Low-Grade Cotton Will Be Tried in Paper Making

Washington, D. C.—The Department of Agriculture is going to help find out if low-grade cotton cannot be made into high-grade paper and contribute that much to higher cotton prices.

The Department announced recently it would divide the cost of buying a small quantity of lint cotton, spinable waste and cotton linters with a group of paper manufacturers to test out the practicability of this possible use of cotton.

The Miracle of Cotton Seed

(Atlanta Journal)

Our distinguished column, "Trends of the Times," spoke entertainingly recently of the scientific progress made in the 1930's in industrial chemistry and told how the decade "took corn cobs, oat hulls, soy beans and milk and turned them into such stuff as automobile bodies will be made of ere we are aware."

A miracle, truly, wrought painstakingly and after a long procession of trials and errors in the test tubes and retorts. But no more of a miracle than the amazing transformation the seed of our Georgia cotton now undergoes in the processing of science. What was regarded as only a nuisance fifty years ago and was burned as so much trash became a \$100,000,000 product for the South in 1939—a product bringing one-tenth of a billion in cash to growers and adding nearly fifty millions additional to the wealth of the section in the form of the wages and profit for the processors. The oil has a hundred important uses in the cuisine of man and in the arts and industries; the meal in its various forms is nutrient for man and beast; the hulls are put to dozens of services for which they fit better than any rival. Then, there is a by-product known by the inelegant but distinctive name of "foots" which was told of over Radio Station WSB recently in the program, "Cotton Facts." "Foots" now are used in making soap, washing powder, blacking, linoleum, oil cloth, artificial leather, roofing materials, and a catalogue of plastics such as photographic films and phonograph records.

No product has afforded a more striking example of the ingenuity of science in utilizing a natural product for the requirements of modern civilization than the cotton seed. Cotton, once King, may have become a handicap because of the agricultural South's single-minded devotion to it, but there is still something regal about the little pellets to which the fiber clings.

Awards To Supply WPA Cottons Made

Washington, D. C.—Awards for furnishing approximately 6,000,000 yards of cotton textiles to the Works Progress Administration for distribution to emergency work relief rooms throughout the United States, on which bids were opened at the procurement division, Treasury Department, December 13th, have been made known. On this particular lot, 50 per cent of the purchase shall be shipped on or before March 10, 1940, and 50 per cent by April 15th.

Among the awards were the following:

Invitation 1046-T, chambray, type A, 36 inch, shrunk, Arista Mills Co., 522,490 yards, and unshrunk, Arista Mills Co., 1,810 yards.

1046-T, chambray, type A, 28 inch, fancy, Bellevue Mfg. Co., 55,000 yards.

1051-T, gingham, 32 inch, checks, Camperdown Co., 100,000 yards, and plaids, Camperdown Co., 279,000 yards.

1047-T, corduroy, 10 inch, Cone Export & Commission Co., 10,000 yards.

1049-T, suiting, cottonade, 8.25, shrunk, Cone Export & Commission Co., 28,000 yards.

1048-T, whipcord, 8.05 ounce, shrunk, Cone Export & Commission Co., 149,300 yards.

1047-T, corduroy, 7.5 oz., Crompton-Richmond Co., 40,000 yards, and 10 oz., Crompton-Richmond Co., 100,000 yards.

1053-T, flannel, 4.3 36 inch, dark solid colors, Eagle & Phenix Mills, 90,000 yards, and shirting, flannel, 5.3 oz., plaids, Eagle & Phenix Mills, 108,000 yards.

1048-T, whipcord, 10 oz., 30 inch, shrunk, Eagle & Phenix Mills, 122,000 yards.

1048-T, covert, 2.25 unshrunk, Lane Cotton Mills, 2,100 yards, and 3.20 coarse yarn, unshrunk, Lane Cotton Mills, 12,000 yards.

1049-T, denim, blue, 2.00 shrunk, Erwin Cotton Mills Co., 59,595 yards.

1055-T, suiting, colored twill, 5.9 shrunk, Erwin Cotton Mills Co., 250,960 yards.

1055-T, suiting, cotton tweed, shrunk, 6.8 oz., Pee Dee Mfg. Co., 281,000 yards.

1048-T, covert, shrunk, Pee Dee Mfg. Co., 190,200 yards.

1046-T, chambray, 27 inch fancy and plaids, Riverside & Dan River Cotton Mills, 8,300 yards.

1052-T, hickory stripes, 3.00, Sibley Enterprise Co., 181,000 yards.

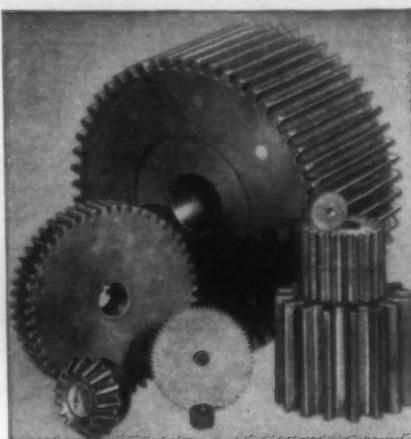
1048-T, covert coarse yarn, 3.20 unshrunk, Stonewall Cotton Mills, 8,000 yards, and 3.00, shrunk, Stonewall Cotton Mills, 100,500 yards.

1046-T, chambray, type A, 36 inch shrunk, Texas Textile Mills, 120,000 yards.

1049-T, denim, blue, 2.00 shrunk, Texas Textile Mills, 672,000 yards.

1049-T, suiting, cottonade, 8.25 shrunk, Texas Textile Mills, 216,000 yards.

1063-T, shirting flannel, plaids, Wade Mfg. Co., 12,000 yards.



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Subsidy Payments On Cotton Exports Are Reduced

Washington, D. C.—A reduction in rate of payment under the cotton export program has been announced by Secretary of Agriculture Henry A. Wallace. The new rate went into effect December 6th.

The new rate of payment will be 0.75 cents per pound of lint cotton exported, instead of the 1.50 cents per pound, which has been the rate since the program went into effect on July 27th. Equivalent reductions will be made in payments on the export of cotton goods.

The revised rates of payment on cotton goods in cents per pound, net weight, are as follows:

A. Card strips, comber waste, and unbattled cotton as a part of a cotton product, 0.75.

B. Picker laps, sliver laps, ribbon laps, sliver, roving, batting, and mattress felts made wholly of unused cotton, card strips, or comber waste or combinations thereof, 0.80.

C. Yarn, thread, twine, cardage, and rope, either polished or unpolished, 0.90.

D. Coated products, including rubber coated and rubberized products, buckram, crinoline, and elastic containing 20 per cent or more of rubber by weight, and articles manufactured therefrom, 0.50.

E. Fabrics (excluding buckram, crinoline, and coated fabrics) absorbent cotton, and elastic containing less than 20 per cent of rubber by weight 1.00.

F. Articles manufactured from fabrics (other than buckram, crinoline, coated fabrics, or elastic containing 20 per cent or more of rubber by weight, 1.10.

G. Articles not otherwise specified and articles containing a mixture of cotton and other fibers, 0.75.

Vinyon, Resin Textile Fiber, Officially Announced

A new textile fiber has recently been officially announced, a vinyl polymer product, sold under the trademark "Vinyon." This fiber, experimentation has indicated, will be suitable for a wide range of products in textile and related lines. It will be put into commercial production immediately by the American Viscose Corp.

"Vinyon" resin textile fiber is made in two general forms, continuous filament yarn and staple fiber; the continuous filament yarn is to be available in practically all standard deniers. Both the cut staple and the continuous filament yarn are to be produced in the stretched and unstretched forms. In the stretched form, it is usually a multifilament yarn, with a denier per filament considerably finer than that of silk.

Development of "Vinyon" fiber makes available to the textile industry an entirely new synthetic textile, possessing a number of unusual characteristics and properties, including high elasticity and high tensile strength.

The fiber can be produced at will with tensile strengths in the range of 1.0 to 4.0 g. per denier; it has a true elasticity comparable with silk—an unusual characteristic in a synthetic material. A procedure for dyeing "Vinyon" fiber or yarn to any of a wide range of colors has been developed. The fiber can be delustered.

Based on data accumulated up to the present, however,

it is believed that specialized applications for "Vinyon" fiber will cover a wide group of knitted and woven textiles. Among important possibilities for the continuous filament yarn are many long-lasting knitted and woven goods and braided articles, including full-fashioned hosiery, bathing suits, chemical workers clothing, raincoatings, umbrella fabrics, tent and awning materials, tarpaulin, and sail fabrics, yachting equipment, fish nets and chemical-resistant hose.

U. S. Cotton Output Drops

Washington, D. C.—The Census Bureau reported that cotton of this year's growth ginned to December 13th totaled 11,275,550 running bales, counting 169,424 round bales as half bales, and excluding linters.

Ginnings to December 13th last year totaled 11,412,139 bales, including 155,680 round bales, and in 1937 ginnings were 16,803,013 bales, including 297,160 round bales.

American-Egyptian cotton included the ginnings totaled 21,539 bales this year, compared with 16,876 bales last year, and 8,555 in 1937.

Ginnings to December 13th, by States, with comparative figures for a year ago, were: Alabama, 767,341 and 1,057,634; Arizona, 154,592 and 154,771; Arkansas, 1,353,939 and 1,293,246; California, 405,495 and 353,509; Florida, 9,621 and 21,902; Georgia, 904,961 and 842,080; Illinois, 4,040 and 2,239; Kentucky, 12,847 and 11,360; Louisiana, 717,668 and 651,007; Mississippi, 421,516 and 324,179; New Mexico, 83,641 and 85,987; North Carolina, 453,767 and 376,542; Oklahoma, 501,223 and 542,234; South Carolina, 846,830 and 630,830; Tennessee, 428,148 and 466,579; Texas, 2,667,172 and 2,934,621; Virginia, 9,920 and \$9,433.

Staple Length of Upland Cotton Ginned To Dec. 13 Shorter

Washington, D. C.—The average staple length of upland cotton ginned prior to December 13th was shorter than the average length to the same date last year, and the proportion of the white cotton in the lower grades was somewhat greater.

Ginnings included about 17 per cent strict middling white or above; almost 32 per cent middling white; 30 per cent strict low middling white or below. About 16 per cent was of the colored grades and about 5 per cent was extra white in color.

Slightly more than 5 per cent of the ginnings was shorter than $\frac{7}{8}$ inch in staple; 46 per cent was of the lengths $\frac{7}{8}$ inch to $31/32$ inch; 44 per cent ranged from 1 inch to $1\frac{1}{2}/32$ inches, and 5 per cent was $1\frac{1}{8}$ inches or longer.

Tenderable grades and staples represent about 93 per cent of the ginnings of upland cotton.

Ginnings to December 13th, according to the Bureau of the Census, were 11,275,550 running bales, including 11,251,908 bales of upland cotton, 21,539 bales of American-Egyptian cotton, and 2,103 bales of Sea Island cotton (round bales counted as half bales and linters excluded).



Illustration Shows a Few of the Different Straps Manufactured By Us

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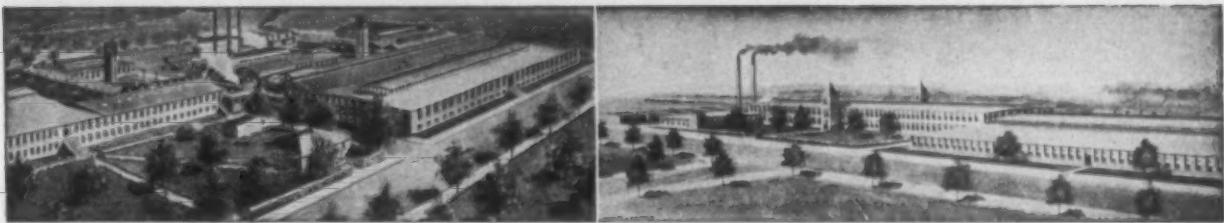
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Visiting the Mills

Intimate Glimpses of Activities in Southern Textile Plants and the Men Who Own and Operate Them.

By Mrs. Ethel Thomas Dabbs (Aunt Becky)

GREENWOOD, S. C.

There's a spirit of friendliness in Greenwood and surrounding territory that is very impressive and makes one fall in love with the place and people.

Everything found in a progressive city is here, with many other attractions added, and strangers are given a hearty welcome. One can't imagine going to church in Greenwood and walking out without being spoken to by leading church members. This is indeed a friendly city.

South Greenwood and Mathews Mills

Here we find one of the most lovely villages in the entire textile South. There are many absolutely modern brick bungalows of artistic design, with plenty of room and every convenience.

Every home is surrounded by shrubbery and tall trees shade the paved sidewalks. The entire village is well kept and passersby exclaim over the beauty of this section. Homes of wooden structure are attractively painted and have lovely lawns and pretty shrubbery.

One of the largest, handsomest and most modern office buildings has just been erected near the mill and is the "main office" for all the "Self" chain of mills. This building is several stories high and is fireproof. Everything in the way of modern equipment for the convenient handling of the vast amount of business is found in this big building with its many offices.

Callie Self Memorial Baptist Church

One of the largest and finest churches to be found is the Callie Self Memorial Baptist Church in South Greenwood, erected by Mr. James G. Self in memory of his mother and in appreciation of her beautiful life.

The auditorium will seat around 500 and has a gradual slope that gives every one an unrestricted view of the pulpit and preacher. The baptismal pool is back of and above the pulpit and has a glass front, which shows the candidates for baptism from waist up.

There are 16 class rooms (if I remember correctly), a

literature room and library, and storage space for ornamental equipment such as flower vases, etc.

The windows are gorgeous stained glass in artistic designs and the pews and chairs are in keeping with the lovely building.

There is the latest thing in automatically controlled heat, with every inch of the building at the same even temperature.

Mr. Honeycutt, the pastor, has a nice home in the nearby parsonage, and is about the happiest and most enthusiastic preacher we've seen in a long time. The church members asked for a part in furnishing the church so Mr. Self agreed to let them carpet it. Everything else, including the auditorium piano, and others for Sunday school rooms, were given by Mr. Self, who is president of all the Self chain of mills—Greenwood Cotton Mills, at Greenwood, the mills at Ninety-Six, and Mathews Mill in South Greenwood.

Mathews Mills

Here we found our friend, Mr. Fred H. Still, holding the fort as general superintendent, with C. T. Rampey as his assistant. A large new addition (or another mill) has been erected here since 1936, and Mathews Mills are second to none in equipment and cleanliness.

The various department heads are men of character and ability, courteous and friendly. It was a pleasure to call on them.

W. E. Cox is overseer carding; H. S. Buzhardt and W. R. Mitchell are second hands; Vernon Rish and D. L. Hudgins, section men; A. W. Jennings, card grinder.

J. F. Snipes, overseer spinning, has a long service record; C. E. Ellis, R. V. Latimer and O. P. Lowery are second hands; W. G. Caldwell, a section man; E. J. O'Banion, overhauler.

J. T. Chalmers, overseer weaving, is a brother to the genial superintendent of Greenwood Cotton Mills and was formerly with Springs Mills at Kershaw, S. C. He has a fine bunch of second hands—R. A. Baines, J. P. Bruton, Robbie Hiley, C. A. Barrett and G. W. Hill. Among the wide-awake loom fixers are J. L. Long, J. T.

Brown, W. D. Owens and W. T. Daniel. D. W. McCutchen is warp man; Wilton Stewart, a weaver, also reads our magazine.

A Beautiful Cloth Room

Overseer H. C. Nelson is justly proud of this nice room. Probably so many pretty girls in the inspecting department keeps him young and happy. Some of the most attractive girls to be found are right here. Miss Alice Wells, one of the jolliest and friendliest, is head grader.

It has been some little time (Nov. 15th) since I visited here and some of my notes got mislaid, or I might have given more personals in this write-up.

Mrs. Carl Bradford, a department timekeeper, whose husband is timekeeper for the entire mill, was wonderfully nice to me. Imagine keeping time for over 1,500 operatives!

C. L. Hammett, who used to be in the mill office, is "general roust-about" (whatever that is) inside the mill now. Years ago when his daughter was a little girl she fell in love with "Aunt Becky Ann" and named herself "Becky." Today she is married and lives in Ware Shoals.

Wm. Y. Miller, office man, and others of the office force have my sincere thanks for a pleasant visit. Having lost my notes, I can't remember all names.

Grendel Mills

Genial H. E. Runge is now general superintendent of Grendel Mills and few men are more beloved by those who work for and with him.

E. W. Seigler is superintendent and these two, working in close harmony with each other, never forget the value of "the personal touch" in human relations. Consequently the best of feeling exists between employer and employee and work runs smoothly.

Panola Mill in South Greenwood is under the same management. The officials are: President and treasurer, J. P. Abney; vice-president, L. E. Foster; secretary, J. E. Burnside; buyer, J. R. Fulp; general superintendent, H. E. Runge, and superintendent, E. W. Seigler.

The writer has heard wonderful things about the generous spirit and big-heartedness of Mr. Abney and regrets not having had the pleasure of meeting him.

Grendel Mills and Panola Mills are on print cloths and run regularly full time, giving work to a lot of people.

E. D. Miles is overseer carding and spinning at Panola Mills; J. Z. Miller is overseer spooling; L. R. Cannon, second hand in spinning; G. L. Putnam, second hand in carding; A. H. Rhodes, second hand in weaving; H. E. Seigler is overseer at Grendel Mill, but that is as far as I can remember—and my notes are lost. So sorry.

CHESNEE, S. C.

Saxon Mills—Chesnee Plant

Occasionally we find "something different" and here we found an entirely new process operating in the carding and spinning rooms, but it might be giving away a secret, even if we could describe it understandingly. Anyway,

where nubby yarn is wanted Overseer J. S. Odom in the card room supplies the "nub" instead of waiting for Overseer C. W. Hill to make it on the spinning frame, as has been the usual method.

This is a nice mill with clean departments, good running work and friendly people.

T. A. Stone, overseer weaving, is well known and well liked. He is turning out some really nice cloth of various styles and weights.

Superintendent Jewell is hard to find since his time is divided between Saxon Mill at Spartanburg and the Chesnee Plant. But I never fail to get a warm welcome at Chesnee.

FINGERVILLE, S. C.

Fingerville, a few miles from Chesnee, has improved so much under the supervision of A. W. Young that one wonders if he is a real "industrial wizard." He has accomplished wonders in both mill and village and keeps right on with the good work. Fingerville is proud of him and rightly so. The mill runs full time regularly even when others curtail. The product is yarns.

CLINTON, S. C.

Clinton and Lydia Cotton Mills are running three shifts and getting along nicely, with E. A. Hill, superintendent.

The main office, located at Clinton Cotton Mills, has been remodeled and two rooms added.

A new brick, seven-stall garage for mill trucks, with a fully equipped repair shop at one end, all attractively covered with composition shingles, has been built.

A new cotton warehouse, of steel and brick construction, two stories high and with 25,000 square feet of space, has been erected.

J. J. West, chief engineer and supervisor of building, is very much interested in every improvement at both Clinton and Lydia Mills. His engine (or turbine) room at Clinton Cotton Mills is the cleanest and most attractive this writer has ever seen.

Superintendent Hill and daughters have recently returned from a trip to New York and the World's Fair.

Overseer Clinton Cotton Mills—J. F. Weir, carder; M. Sanders, spinner; C. F. Oakley, spooler; W. R. Thomas, slasher; A. H. Hughes, weaver; S. G. Snelgrove, cloth room.

Lydia Cotton Mills, a couple of miles out of town, is one of the nicest in the State. This mill has been overhauled and wonderfully improved. Looms are being added to bring the number up to 1,290.

The village homes are large, roomy and kept in good condition, and the entire setting shows up beautifully now with the surrounding trees in gorgeous autumn colors.

Overseers at Lydia are J. H. Von Hollen, carder; Mr. Cobb, spinner; Mr. Neal, weaver; Mr. Hurston, cloth room. They have all been here quite awhile.

Southern Sources of Supply

For Equipment, Parts, Material, Service

Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

AMERICAN BLOWER CORP., Detroit, Mich. Sou. Offices: Court Square Bldg., Baltimore, Md.; 1211 Commercial Bank Bldg., Charlotte, N. C.; Rooms 716-19, 101 Marietta St. Bldg., Atlanta, Ga.; 846 Baronne St., New Orleans, La.; 1005-6 American Bldg., Cincinnati, Ohio; 619 Mercantile Bldg., Dallas, Tex.; 201 Petroleum Bldg., 1314 Texas Ave., Houston, Tex.; 310 Mutual Bldg., Kansas City, Mo.; 620 S. 5th St., Architects and Bldrs. Exhibit Bldg., Louisville, Ky.; 1433 Oliver Bldg., Pittsburgh, Pa.; 7 North 6th St., Richmond, Va.

AMERICAN CYANAMID & CHEMICAL CORP., 30 Rockefeller Plaza, New York City. Sou. Office and Warehouse, 822 W. Morehead St., Charlotte, N. C.; Hugh Puckett, Southern Sales Mgr. Reps., John D. Hunter, C. B. Suttle, Jr., A. W. Foley, Charlotte Office; E. J. Adams, 1404 S. 22nd St., Birmingham, Ala.; Jack B. Button, 1202 W. Market St., Greensboro, N. C.; Eugene H. Driver, 272 14th St., N. E., Atlanta, Ga.; Wilton H. Earle, Jr., 409 Westfield Ave., Greenville, S. C.

AMERICAN MOISTENING CO., Providence, R. I. Southern Plants, Charlotte, N. C., and Atlanta, Ga.

ARMSTRONG CORK CO. (Textile Division), Lancaster, Pa. Sou. Office, 33 Norwood Place, Greenville, S. C. J. V. Ashley.

ARNOLD, HOFFMAN & CO., Inc., Providence, R. I. Chester L. Eddy, asst. sales mgr., 903-904 Woodside Bldg., Greenville, S. C. Sou. Reps., W. Chester Cobb, Box 1268, Charlotte, N. C.; Robert E. Buck, Box 904, Greenville, S. C.; Harold T. Buck, 1615 12th St., Columbus, Ga.; D. Floyd Burns, Jr., Box 198, Durham, N. C.

ASHWORTH BROS., Inc., Charlotte, N. C. Sou. Offices, 44-A Norwood Place, Greenville, S. C.; 215 Central Ave., S. W., Atlanta, Ga.; Texas Rep., Textile Supply Co., Dallas, Tex.

ATLANTA HARNESS & REED MFG. CO., Atlanta, Ga. Succeeded by Steel Heddle Mfg. Co., Atlanta Division. (See this company's listing.)

AUFFMORDT & CO., C. A., 2 Park Ave., New York City. Sou. Rep., S. L. Diggle, Jr., 522 Hawthorne Lane, Charlotte, N. C.

BANCROFT BELTING CO., Boston, Mass. Sou. Distributor, Carolina Supply Co., Greenville, S. C.

BARBER-COLMAN CO., Rockford, Ill. Sou. Office, 31 W. McBee Ave., Greenville, S. C. J. H. Spencer, Mgr.

BECCO SALES CORP., Buffalo, N. Y. Sou. Reps., J. D. Quern and D. S. Quern, 1930 Harris Road, Charlotte, N. C. York City. Carolinas Rep., R. H. Morinor, 122 S. Blvd., Charlotte, N. C.

BORNE, SCRYSER CO., 17 Battery Place, New York City. Sou. Mgr., H. L. Siever, P. O. Box 1169, Charlotte, N. C. Sales Reps., W. B. Uhler, 608 Palmetto St., Spartanburg, S. C.; R. C. Young, 1546 Stanford Place, Charlotte, N. C.; John Ferguson, P. O. Box 592, LaGrange, Ga.

BUTTERWORTH & SONS CO., H. W., Philadelphia, Pa. Sou. Rep., J. H. Zahn, Johnston Bldg., Charlotte, N. C.

CAROLINA REFRACTORIES CO., Hartsville, S. C.

CHARLOTTE CHEMICAL LABORATORIES, Inc., Charlotte, N. C.

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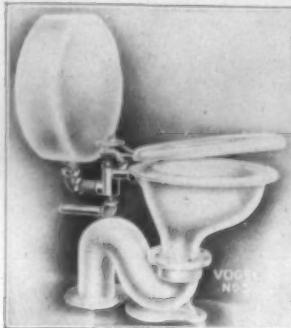
DALLAS, N. C.—An additional yarn conditioning room is under construction at the Robinson Yarn Mill, Superintendent R. F. Harris announces. New machinery is being installed, in keeping with the policy to keep the factory in good shape.

ELKIN, N. C.—Construction work has been nearly completed on the local plant additions of the Chatham Mfg. Co., manufacturers of blankets.

It is estimated that the transfer of operations from Winston-Salem to Elkin will be started around the first of the year.



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